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UK Electronics
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工業技術研究院
Industrial Technology
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UK-Taiwan Semiconductor Joint Skills Project

In partnership with SEMI Taiwan

This experience has reaffirmed my interest in pursuing a career in the semiconductor industry. Seeing first-hand how advanced and influential the industry is here in Taiwan has been incredibly inspiring. It has also given me a better understanding of how the knowledge and experiences I gain now can contribute to my future career in electronics and semiconductors.

Martha Ssenoga, Aston University



UKESF Scholars, alongside UKESF Trustee, Dr Derek Boyd, visited Taiwan to broaden their understanding of semiconductors and gain unique insight into the industry.

Funded by Department for Science, Innovation and Technology and working in partnership with SEMI Taiwan, the Scholars participated in a packed agenda of workshops, industry visits and university education. They also had the opportunity to meet and collaborate with Taiwanese students from National Yang Ming Chiao Tung University, fostering meaningful international connections and strengthening cross-cultural understanding.



“The visit to UMC stood out as a particularly impactful experience. Being able to view live feeds from a fabrication facility was fascinating and gave me a real sense of the scale and complexity of semiconductor manufacturing.”
David Mead, University of Glasgow

Objectives of the trip

- Gain an appreciation of Taiwan’s position in the global semiconductor eco-system, past, current and future.
- Understand more about the semiconductor value chain and appreciate size/scale of the semiconductor industry in Taiwan.
- Acquire additional semiconductor knowledge to complement UK studies.
- Meet and engage with Taiwanese students to gain insight into their culture and develop international connections.





Programme

Monday	Tuesday	Wednesday	Thursday	Friday
2 March	3 March	4 March	5 March	6 March
Semiconductor Industry Overview (SEMI) & Industry-led Session	Embedded Systems Fundamentals & Lab	ITRI (TBD) Industry Visit 1 & Industry Visit 2	Industry-led Session (TSMC)	Verilog Design & Verification Workshop (SICADA)
9 March	10 March	11 March	12 March	13 March
Embedded Systems Fundamentals & Lab (Prof. Chun-Hao Chen)	Semiconductor Device Physics & Electronics Lab (Prof. Chao-Yao Yang)	TSMC Museum Industry Visit 3	MRAM Simulation Workshop (TSMC-NYCU) NYCU Research & UK-Taiwan Forum	Academia Sinica (TBD) Networking Event @ MOFA



“One thing I thought we could implement in the UK is a method of teaching that is used at the NYCU. Not only do students get lectures from academics but also from industry partners – for example, an employee from TSMC might come in to deliver a few lectures on a relevant topic. This interaction with industry means the course stays relevant and up-to-date with current industry practices.
Zachary Danzig, Loughborough University



Scholar feedback

“One of my highlights so far has been interacting with the Taiwanese students and working together during the lab sessions. It has been a great opportunity to exchange knowledge, learn from each other, and compare our university experiences. At the same time, it has also been really enjoyable just having conversations and getting to know one another.

Martha Ssenoga, Aston University



“The lectures and labs were very interesting, and exposed me to things that are not really taught on my degree. On my specific degree programme, at the undergraduate level, we do not see as much of what they were being taught in Taiwan, namely about semiconductor advanced packaging, spintronics, and to a lesser extent IC design.

Alfie Hands, University of Birmingham



“I enjoyed the industry visits on the trip as I found these were a good way of learning about the semiconductor industry in Taiwan from a business perspective.

I also enjoyed being able to interact with Taiwanese students as it was interesting to compare their perspectives to those of UK students, in terms of their attitudes to education, careers, and the semiconductor industry.

Samuel Kennedy, University of Southampton

Scholar advocacy



Sam Kennedy • 1st

MEng Electronics student at University of Southampton. Intern at ARM. UKESF...
1d • 🌐

This week I have returned from a 2 week visit to Taiwan to take part in the UK-Taiwan Semiconductor Joint Skills Project.

This was a course based at [National Yang Ming Chiao Tung University](#) in Hsinchu, involving lab sessions, industry-led talks, and industry visits. The goal of the visit was to learn more about the semiconductor industry in Taiwan and about the semiconductor industry in general. Companies included [United Microelectronics Corporation \(UMC\)](#), [Industrial Technology Research Institute \(ITRI\)](#) (工業技術研究院, 工研院), [TSMC](#), [Realtek Semiconductor Corp.](#), [Egis Technology](#) 神盾股份有限公司, [Ardentec Singapore Pte Ltd](#), [Sicada](#), and [PUFsecurity](#).

Huge thanks to [SEMI Taiwan](#), [Department for Science, Innovation and Technology](#), [UK in Taiwan 英國在台辦事處](#), [National Yang Ming Chiao Tung University](#), and [UK Electronics Skills Foundation \(UKESF\)](#) for organising this trip. Thanks also to [Arm](#) for sponsoring my UKESF scholarship, making this possible.



Martha Ssenoga • 2nd

Third Year MEng Electrical and Electronic Engineering Placement Student | UK...
22h • 🌐

I had the incredible opportunity to take part in the UK-Taiwan Semiconductor Joint Skills Project, travelling to Taiwan alongside other students to explore one of the world's leading semiconductor ecosystems.

Throughout the programme, I engaged in a wide range of technical lectures, workshops, and hands-on experiences. This included COMSOL simulations, cleanroom exposure, and sessions focused on the skills and real-world experience required to work in semiconductor fabrication environments. Alongside this, we explored embedded systems through practical labs, semiconductor device physics and electronics, Verilog design and verification.

A highlight of the experience was learning alongside and interacting with Taiwanese students. Collaborating with them and exchanging perspectives on university life, career aspirations, and cultural experiences made the trip even more enriching.

These academic sessions were complemented by industry visits, giving us valuable insight into how semiconductor processes operate at scale and how innovation is driven within leading companies.



Ronit Ravi • 1st

EIE (Computer Engineering) @ Imperial College London, Masters of ...
43m • 🌐

I don't think any lecture or textbook could have prepared me for how surreal it was to experience Taiwan's semiconductor ecosystem first-hand.

I had the incredible opportunity to be one of just 10 UK scholars selected through the [UK Electronics Skills Foundation \(UKESF\)](#) to take part in a two-week academic semiconductor trip.

Based in Hsinchu, Taiwan's Silicon Valley, and in close collaboration with [National Yang Ming Chiao Tung University](#), this was truly an awe-inspiring experience that offered a first-hand perspective into one of the most advanced chip manufacturing hubs in the world.