



INTENSE Program-  
International Industrial Talents Education Special Program

## International Master's Program in SEMICONDUCTOR ENGINEERING

# 1+1+2

- 1 Year of Specialized Study
- 1 Year of Corporate Internship
- 2 Years of Guaranteed Employment in Taiwan



Partnering with SPIL to Cultivate Semiconductor Industry Elites

### PROGRAM OVERVIEW

Co-organized by Tunghai University's Department of Chemical Engineering and Materials Science and Siliconware Precision Industries Co., Ltd. (SPIL), this program focuses on "semiconductor process and management." The curriculum includes semiconductor technology, quality management, and data analysis, with industry case studies and research projects. In the second year, students will intern full-time at SPIL, gaining practical experience and writing a professional report as their thesis. Upon graduation, SPIL offers a guaranteed two-year employment opportunity for a smooth transition into the workforce.

- **Degree:** Master of Science in Engineering (M.S.)
- **Language of Instruction:** Mandarin Chinese
- **Enrollment:** 20 students
- **Duration:** Two-year master's program (one year of on-campus courses, one year of full-time internship)
- **Career Path:** Graduates are guaranteed two years of employment in Taiwan
- **Partner Company:** Siliconware Precision Industries Co., Ltd.

### APPLICATION REQUIREMENTS

- ✓ **Language Proficiency:**
  - TOCFL Level 2 (equivalent to CEFR A2) in listening and reading at entry
  - Must achieve TOCFL Level B1 (equivalent to CEFR B1) by the second year
- ✓ **Professional Background:**
  - Background in Chemical Engineering, Materials Science, or related fields
  - Other science and engineering-related disciplines are also eligible

### SCHOLARSHIPS AND STIPENDS



#### Scholarships

- Tuition and fees reduced by NTD 50,000 per semester
- Second-year tuition reduction awarded based on academic performance
- Coverage of airfare to Taiwan, visa, and document verification fees (※ only for graduates of universities outside Taiwan)



#### Corporate Stipends

- **Year 1: Monthly living allowance of NT\$10,000**
- **Year 2: Monthly internship allowance of NT\$33,000**



#### Employment Guarantee

- Guaranteed employment opportunities in Taiwan upon graduation
- Must fulfill a minimum of 2 years of employment with the partner company, SPIL

※ Recipients of scholarships and grants who withdraw from the program or fail to fulfill the employment obligation must return the funds.

### TUITION AND FEES

- ✓ **Tuition fees(per semester, NTD\$)**
  - International students: NT\$68,000
  - Overseas Chinese students: NT\$57,000
- ✓ **Other fees (per semester, NTD\$)**
  - Student Accident Insurance: NTD 235
  - National Health Insurance (NHI): NTD 4,956 (calculated as 6 months per semester)
  - Computer and Network Usage Fee: NTD 550
  - Accommodation: NTD 10,200 - NTD 41,300 (on-campus dormitory)





## SILICONWARE PRECISION INDUSTRIES CO., LTD

- Founded in 1984, headquartered in Tanzi, Taichung
- A global leader in packaging and testing services, providing comprehensive services for a variety of products, including personal computers, communication products, consumer electronics, and memory devices.
- It excels in advanced packaging technologies, such as Fan-Out Wafer Level Packaging (FO-WLP), System-in-Package (SiP), 2.5D/3D IC packaging, high bandwidth packaging, and heterogeneous integration packaging, possessing leading technology and capacity in these fields.



## CURRICULUM PLAN

- ✓ **Year 1 Academic Coursework**  
Focus on core courses in semiconductor process technology, quality management, and data analysis. At the end of each semester, there will be a project presentation, inviting industry professionals to evaluate student performance.
- ✓ **Year 2 Industrial Internship and Practice Report**  
Full-time internship at SPIL, covering topics such as SPC, seven quality tools, failure analysis, IATF 16949, and automotive safety. Writing a professional practice report as the graduation thesis.

## CREDIT REQUIREMENTS

### Total of 36 credits required for graduation

(The courses offered based on the demand of the academic year)

### Year 1

#### Required: 3 credits (choose one out of four)

Advanced Transport Phenomena  
Principles of Chemical Engineering  
Advanced Chemical Engineering Thermodynamics  
Advanced Chemical Reaction Engineering

#### Electives: 9 credits

Process- Methods of Optimal Synthesis  
Electronic Materials  
Process - Semiconductor Manufacturing Technology

### Year 2

#### Internship: 18 credits

- 40 hours/week
- Professional Internship Content
  - Statistical Process Control (SPC) and Data Analysis
  - Problem Solving and Process Improvement
  - Quality Management Systems and Standards
  - Reliability and Safety

#### Thesis: 6 credits

- Professional Practice Report

## CHINESE LANGUAGE SUPPORT

- 4 hours of free intensive Chinese language courses per week to help students reach TOCFL Level B1 in the second year.
- Offer "Engineering Chinese" courses related to the field of chemical engineering and materials science to improve language proficiency in the professional field.
- Offering "Diverse Study Buddy Programs" pairing local students to provide after-class Mandarin tutoring and exchange opportunities.

## PROSPECTIVE POSITIONS & RESPONSIBILITIES

- ✓ **Prospective Position**
  - Product Process Engineer
  - Process Integration Engineer
- ✓ **Responsibilities**
  - Design and improve production processes, ensure quality, quantity and production efficiency.
  - Execute quality control.
  - Collaborate with other departments for new product launches and process optimization.

**APPLY NOW**



2025 INTENSE Program