

1. **Program title:** Electromechanical Maintenance Program in the Department of Electrical Engineering, two-year bachelor's degree program, taught in English.

2. **Program Features:**

(1) In response to the demand in Taiwan's electromechanical automation design field, integrating relevant technologies to cultivate talent, the program aims to train and recruit university students in their third or fourth year, as well as graduates from vocational schools.

(2) The duration of study is two years, belonging to a two-year bachelor's degree program. The fourth semester includes an off-campus internship, and graduation requires completing at least 72 credits. In the second year, passing the Test of Chinese as a Foreign Language (TOCFL) at the A2 elementary level is required.

(3) The course content integrates industry trends and the needs of collaborating companies, designing professional practical courses to cultivate students' knowledge and practical skills in precision machinery.

(4) The collaborating companies offer internship opportunities in related fields such as assistant engineers and other related areas. These companies include E-Top Metal Co., Ltd., E-Sheng Steel Co., Ltd., TMP Steel Co., Ltd., United Fiber Optic Communication Co., Ltd., and TSG Power Co., Ltd.

3. **Institution:** Taiwan Steel University of Science and Technology / Department of Electrical Engineering / Two-year bachelor's degree program / Spring Semester 2025

4. **Curriculum Guideline:** Including course language, curriculum content (university curriculum and internship)

(1) Courses Language: Taught in English, supplemented by Chinese.

(2) Curriculum Content:

First Year	Second Year
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First Semester	Second Semester	First Semester	Second Semester
General Courses: 18 Credits		(Credits-Course hours)	
Basic Chinese(1) 6/6	Advance Chinese(2) 6/6	Law and Life 2/2	
		Digital Transformation 2/2	
		Introduction to Sustainable Development 2/2	
Required Course: 27 Credits		(Credits-Course hours)	
Industrial Wiring Internship 3/3	Electrical Machinery Practical Application 3/3	Mechatronics Application Practice 3/3	
Electronic Circuit Practice 3/3	Programmable Logic Controller Lab 3/3	Application of Artificial Intelligence 3/3	
Computer Programming 3/3	Microprocessor Application Practice 3/3	Human Machine Interface Practice 3/3	
Elective Course: Minimum 27 Credits		(Credits-Course hours)	
Green Energy 3/3	Practice for Interface Wiring of Mechatronics 3/3	Embedded Systems and Applications 3/3	Computer-integrated Smart Manufacturing Practice 3/3
Electrical Engineering 3/3	Solar Photovoltaic Power Generation System 3/3	Application to Internet of Things 3/3	SERVO CONTROL INTERNSHIP 3/3
Industrial Instrument Practice 3/3	Lab of Indoor Wiring 3/3	Motor Drive Practice 3/3	PC Based Control and Practice 3/3
Applied Engineering Mathematics 3/3	Electromagnetism 3/3	SECURITY IN NETWORK OF INFORMATION 2/2	Network Monitoring Practice 3/3
The applications	Sensor Technology Principles and	Motor Fault Diagnosis 3/3	Energy Management

of Internet 2/2	Applications 3/3		Practice 3/3
Mechatronics Agency Established Internship 3/3	Power Electronics Practice 3/3	Image Processing and Practice 3/3	Internship 8/40
	Advanced Programming Design and Practice 3/3		
General Courses		18 credits	
Required course		27 credits	
Elective course		At least 27 credits (include internship which consists of 8 credits) must be completed.	
Total minimum credits		72 credits	

5. Entry Requirement:

Admission requirement: CFER listening and reading minimum level B1 (Language certification must be ETS certified (TOEIC, IELTS, TOEFL). Chinese Language Proficiency Test (TOCFL) must be A2 before the second year of admission. (Both listening and reading must be level A2 or above)

6. Requirement for graduation:

Credits: 72 credits, including general education courses 18 credits, required courses 27 credits, elective courses minimum 27 credits (include internship which consists of 8 credits).

7. Post-Graduation Employment Obligations:

The obligation period for students hired corresponds to the duration of receiving the corporate living allowance. For instance, those receiving a 2-year living allowance from the industry are obligated to work for a period of 2 years.

If student successfully passes assessments conducted by both the school and the industry, completes their academic requirements, and obtains a degree, the collaborating industries have the right to hire and should provide suitable positions and salary should not be less than the average salary in the same field. The employment should align with the vacancies provided by the industry and the competency requirements for the positions as outlined below:

No.	Collaborating Company Name	Job/Positions		Skill Requirement
1	E-top Metal Co., Ltd.	Assistant Engineers	10	Electrical Equipment Maintenance and Troubleshooting 、 Abnormality Analysis and Improvement for Electrical Equipment 、 Equipment Abnormality Inspection, Repair and Optimization Improvement
2	E-Sheng Steel Co., Ltd.	Assistant Engineers	10	Electrical Equipment Maintenance and Troubleshooting 、 Abnormality Analysis and Improvement for Electrical Equipment 、 Equipment Abnormality Inspection, Repair and Optimization Improvement
3	TMP Steel Co., Ltd.	Assistant Engineers	10	Electrical Equipment Maintenance and Troubleshooting 、 Abnormality Analysis and Improvement for Electrical Equipment 、 Equipment Abnormality Inspection, Repair and

				Optimization Improvement
4	United Fiber Optic Communication Co., Ltd.	System Engineers	5	Apply and Test New Hardware and Software 、 Install and Maintain Hardware and Software 、 Resolve Technical Issues 、 Equipment Delivery and Installation
		Hardware Engineers	5	Project-based Hardware System Research 、 Circuit Design 、 Hardware Integration Testing 、 Hardware Engineering Technology Development
		Software Engineers	5	Project Firmware Development 、 System Platform Development 、 Software Analysis and Design 、
5	TSG Power Co., Ltd.	Field Engineer	15	Assistance in Measuring Dimensions 、 Drawing and Checking Drawing Data and Pattern Management 、 Dispatch of On-site Supervisors and Process Processing
total	5 companies	60 job openings		

8. Scholarships:

- (1) Include the first and second year of National Development Fund Scholarships qualifications.

Unit	Content	Limit	Note
National Development Fund	Administrative fees for arrival in Taiwan	For students coming to Taiwan from the New Southbound Policy region and other countries, the maximum amount is 10,000 New Taiwan Dollars.	One-time subsidy covering pre-arrival health check expenses, visa fees, and document verification fees.
	One-way flight ticket	For students coming to Taiwan from the New Southbound Policy region and other countries, the maximum amount is 9,000 New Taiwan Dollars.	One-time subsidy, the airfare is verified based on the economy class one-way ticket for the most direct route to Taiwan.
	Industry-Academia Collaboration Scholarship	First Year: Tuition and miscellaneous fees are provided to students in their first year of enrollment.	Second Year: For student who reach TOCFL B1 or above and

Unit	Content	Limit	Note
		<p>after reviewing the scores and performance by the school and collaborating industry, tuition and miscellaneous fee subsidies will be awarded based on merit.</p>	<p>2. A maximum of two years of tuition and miscellaneous fee subsidies will be provided.</p> <p>3. obligations for staying in Taiwan for employment will apply based on the number of years the scholarship is received. Specifically, recipients of the scholarship for one year will have a one-year obligation to stay in Taiwan for employment, and those receiving the scholarship for two years will have a two-year obligation to stay in Taiwan for employment.</p>
University	Study Scholarship	<p>To assist students in studying with peace of mind, our school provides students with a scholarship of 5,000 New</p>	<p>The accommodation fee waiver is only available for those who apply for on-campus accommodation.</p>

Unit	Content	Limit	Note
		Taiwan Dollar for living expenses in the first semester, as well as a full waiver for the dormitory fees for the first semester. (Dormitory will be arranged by the school, and students may not choose their own dormitories).	

(2) Industry-Academia Collaboration Scholarship Requirement

Student who withdraws from the specialized program or fails to fulfill employment contract after graduation, the repayment principles for the scholarships as follows:

1. If the circumstances are not under student control, there is no requirement for repayment:
 - (1) Due to the operational adjustment, the original collaborating industry ceases to provide living allowance to student during their learning and student is unable to achieve additional support from other industry, leading the student's withdrawal from the specialize program.
 - (2) Due to the operational adjustment, the original collaborating company has no job vacancies available for employment upon the student's graduation and , and despite the school's efforts in providing career guidance and facilitating job placement, the student is unable to secure suitable employment opportunities.

- (3) If the collaborating company, during the student's employment period, encounters situations as specified in Article 14, Paragraph 1 of the Labor Standards Act, leading the student to terminate the contract, and despite the school's efforts in providing career guidance and facilitating job placement, the student is still unable to find a suitable company for subsequent employment.
 - (4) Student's death, severe illness, or an unforeseen accident preventing them from continuing their studies or employment, a certified document issued by a teaching hospital rated at or above the level of accreditation by the Ministry of Health and Welfare, stating the student's inability to continue education or employment, or in cases where significant family upheaval due to an accident prevents the student from pursuing education or employment, as verified by the school.
2. If the circumstances are under student control, requirement for repayment:
- (1) Withdrawal from the specialized program during the academic period due to personal reasons such as applying for transfer, changing majors, absence, or returning to one's home country. Even after guidance provided by the school, if the student chooses to leave the specialized program or if the school, in accordance with its regulations, initiates withdrawal or expulsion.
 - (2) Poor academic performance, failure to meet the evaluation standards set by both the school and the collaborating industry. Even after school guidance, student fails improve, and in accordance with the school regulations, the student faces withdrawal or expulsion. In such cases, the student is required to repay the previously received industry-academia scholarships.
 - (3) After graduation, student chooses not to pursue employment with the collaborating industry or in the relevant industrial field, or if, after employment, the student violates company regulations leading to lawful termination of the labor contract, and after school guidance, no improvement is observed, the student is obligated to repay the received industry-academia funding.

- (4) If a student, during the employment period with the collaborating industry, does not complete the specified duration for receiving industry-academia scholarship, repayment should be made based on the proportion of the remaining months unemployed; for periods less than one month, one month's repayment is required.

9. Living allowance requirement:

(1) Living Allowance:

Unit	Content	Limit	Note
Collaborating companies of the program	Living Allowance	During the student's academic period and before participating in the internship, the monthly stipend is set at 10,000 New Taiwan Dollars per person.	The student may only choose one of living allowance or internship allowance. After graduation, students are obligated to seek employment in Taiwan. Industries who provide subsidies have the right to prioritize the employment of these students.
	Internship Allowance	During the off-campus internship period, each person will receive a monthly internship allowance not less than the minimum wage, with overtime pay calculated separately.	

(2) Living Allowance Requirement:

Student who withdraws from the specialized program or fails to fulfill employment contract after graduation, the repayment principles for the living allowance as follows:

1. If the circumstances are not under student control, there is no requirement for repayment:

- (1) Due to the operational adjustment, the original collaborating industry ceases to provide living allowance to student during their

learning and student is unable to achieve additional support from other industry, leading the student's withdrawal from the specialize program.

- (2) Due to the operational adjustment, the original collaborating company has no job vacancies available for employment upon the student's graduation.
 - (3) If the collaborating company, during the student's employment period, encounters situations as specified in Article 14, Paragraph 1 of the Labor Standards Act, leading the student to terminate the contract, no repayment is needed.
 - (4) Student's death, severe illness, or an unforeseen accident preventing them from continuing their studies or employment, a certified document issued by a teaching hospital rated at or above the level of accreditation by the Ministry of Health and Welfare, stating the student's inability to continue education or employment, or in cases where significant family upheaval due to an accident prevents the student from pursuing education or employment, as verified by the school.
2. If the circumstances are under student control, requirement for repayment:
- (1) Withdrawal from the specialized program during the academic period due to personal reasons such as applying for transfer, changing majors, absence, or returning to one's home country. Even after guidance provided by the school, if the student chooses to leave the specialized program or if the school, in accordance with its regulations, initiates withdrawal or expulsion.
 - (2) Poor academic performance, failure to meet the evaluation standards set by both the school and the collaborating industry. Even after school guidance, student fails improve, and in accordance with the school regulations, the student faces withdrawal or expulsion.
 - (3) Student is not employed to the collaboration industry 3 months after graduation.

- (4) If a student, during the employment period with the collaborating industry, does not complete the specified duration for receiving industry-academia living allowance, repayment should be made based on the proportion of the remaining months unemployed; for periods less than one month, one month's repayment is required.

一、專班名稱：電機工程系機電維修專班, 學士兩年制學士專班, 英文授課

二、專班特色：

(一) 因應臺灣機電自動化維修領域需求, 整合相關技術培育人才, 旨在訓練並招收大學升三年級學生或專科畢業生。

(二) 修業年限為兩年, 屬於學士二年制學士專班, 第四學期安排校外實習, 畢業需完成至少 72 學分。入學第 2 年需要通過華語文能力測驗(TOCFL)進階級(Level 2, 相當於 CEFR A2)聽、讀 2 項皆須達 A2 級(含)以上。

(三) 課程內容結合產業趨勢與合作公司需求, 規劃專業實務課程, 培育學生機電維修相關知識與實務技能。

(四) 合作企業提供助理工程師等相關領域的實習機會, 包括慶欣欣鋼鐵股份有限公司、易昇鋼鐵股份有限公司、沛波鋼鐵股份有限公司、聯合光纖通信股份有限公司、台鋼能源工程股份有限公司。

三、開班學校/系所/學制：

台鋼科技大學/電機工程系/學士二年制學士專班/2025 年春季班

四、課程規劃：包含授課語言、課程內容(含校內課程、校外實習之安排)

(一)授課語言：英文授課為主，中文為輔。

(二)課程內容：

第一年		第二年	
第一學期	第二學期	第一學期	第二學期
通識基礎課程:共 18 學分 (學分數/授課時數)			
基礎華語(一) 6/6	進階華語(二) 6/6	法律與生活 2/2	
		數位轉型 2/2	
		永續發展概論 2/2	
專業必修:共 27 學分 (學分數/授課時數)			
工業配線實習 3/3	電機機械實務應用 3/3	機電整合應用實務 3/3	
電子電路實務 3/3	可程式控制器實務 3/3	人工智慧應用 3/3	
計算機程式設計 3/3	微處理機應用實務 3/3	觸控人機系統應用實務 3/3	
專業選修:至少選 27 學分 (學分數/授課時數)			
綠色能源 3/3	機電介面配線實務 3/3	嵌入式系統應用 3/3	電腦整合智慧轉型實務 3/3
電機學 3/3	太陽能光電系統 3/3	物聯網應用 3/3	伺服控制實習 3/3
工業儀表實務 3/3	室內配線實習 3/3	電動機驅動實務 3/3	PC based 控制與實務 3/3
應用工程數學 3/3	電磁學 3/3	資訊安全 2/2	網路監控實務 3/3
網際網路應用 2/2	感測器技術原理與應用 3/3	電機故障診斷 3/3	能源管理實務 3/3

機電整合機構組 立實習 3-3	電力電子學實務 3-3	影像處理與實務 3/3	企業實習 8-40
	進階程式設計 3-3		
通識基礎課程		18 學分	
專業必修		27 學分	
專業選修		至少修 27 學分(其中企業實習占 8 學分)	
最低畢業學分數		72 學分	

五、入學資格：

語言能力要求：英文授課，學生入學前英文能力須達 CEFR B1 級(含)以上(需是 ETS 之合格證書(TOEIC, IELTS, TOEFL) (入學第 2 年華語文能力聽、讀 2 項建議須達 A2 級(含)以上)。

六、畢業門檻：

本專班課程安排包括通識基礎必修課程 18 學分，專業理論及實作必修課程 27 學分；專業理論及實作選修課程 27 學分(企業實習佔 8 學分)，學生畢業門檻需滿足 72 學分。

七、畢業後履行就業義務：

領取國發基金產學獎助金的學生，依據領取年限具有相應留臺就業年限的義務。

學生如通過學校及企業評核，完成學業取得學位，合作企業具聘用權，應提供適合職缺及不低於同領域平均薪資之待遇，留用並聘僱學生。配合企業所提供的職缺及該職缺所需的職能要求如下：

編號	專班合作/ 企業名稱	職務需求/人數	專業能力
1	慶欣欣鋼鐵股份有限公司	助理工程師	10 電器設備保養和故障查修、電氣設備請購管理及異常分析改善、電氣設備改善及圖面修訂與報告管理、廠內設備異常查修及優化改善
2	易昇鋼鐵股份有限公司	助理工程師	10 電器設備保養和故障查修、電氣設備請購管理及異常分析改善、電氣設備改善及圖面修訂與報告管理、廠內設備異常查修及優化改善
3	沛波鋼鐵股份有限公司	助理工程師	10 電器設備保養和故障查修、電氣設備請購管理及異常分析改善、電氣設備改善及圖面修訂與報告管理、廠內設備異常查修及優化改善
4	聯合光纖通信股份有限公司	系統工程師	5 應用並測試新的硬體和軟體、安裝和維護硬體和軟體、與外部供應商合作進行設備交付和安裝、解決技術問題
		硬體工程師	5 專案型硬體系統研發及電路設計、硬體整合測試、硬體工程技術開發、硬體維修改善及相關硬體零件控制

		軟體工程師	5	專案軟體開發及系統平台開發、軟體分析設計與撰寫、因應專案需求撰寫軟體
5	台鋼能源工程股份有限公司	工務工程師	15	視圖能力、現場監工人員調派及工序處理、協助丈量尺寸繪圖及核對圖面資料和圖案管理
合計	5 家	60 個職缺		

八、獎助金說明：

(一)錄取之學生，經審核通過將由國發基金提供產學獎助金。獎助

金包括：

獎 / 補助單位	獎/補助項目	獎/補助額度上限	說明
國發基金	初次來臺之相關必要行政費用	新南向區域國家及其他國家來臺，上限新臺幣 10,000 元。	採一次性補助，包含來臺前的健康檢查費用、簽證費用及文書驗證費用。
	單程機票	新南向區域國家上限為新臺幣 9,000 元。	採一次性補助，機票費用以來臺最直接航程之經濟艙單程機票核實請領。
	產學獎助金	第一年： 學生入學第一年給予學雜費補助。	1. 依學生實際應繳交給學校學雜費給予補助，每年補助

獎 / 補 助 單 位	獎/補助項目	獎/補助額度上限	說明
		第二年： 華語文能力測驗 (TOCFL)需達 B1 級 (含)以上，且需通過 學校與合作企業審 查成績與表現後， 擇優核給學雜費補 助。	上限 10 萬元(一學期上限 5 萬元)。 2. 最多補助 2 年學雜費。 3. 依據領取年限具有相應留 臺就業年限的義務。即領取 1 年產學獎助金者，具有 1 年留臺就業義務；領取 2 年 產學獎助金者，具有 2 年留 臺就業義務。
本 校	學 習 助 學 金	本校為協助學生安 心就學，於第一學 期提供學生 5,000 元生活獎助學金， 以及第一學期本校 宿舍費之全額獎助 學金。(限申請本校 宿舍之學生，並宿 舍由本校安排，學 生不得挑選)。	住宿費用減免僅提供申請校內 住宿者。

(二)學生如中途退出專班或畢業後未履約就業者，所受領之產學獎

助金必須依規定之原則繳還。原則如下：

1. 屬不可歸責於學生之原因，無須繳還產學獎助金：

- (1) 原合作企業因營運調整，於學生在學期間停止提供生活津貼，又學生經學校媒合仍無法覓得其他企業願意續予補助生活津貼，致學生中途退出專班者。
- (2) 原合作企業因營運調整，於學生畢業時無職缺可聘用，又學生經學校進行就業輔導及媒合其他企業仍無法覓得適合企業聘僱者。
- (3) 合作企業於學生就業期間有勞動基準法第十四條第一項規定情形，致學生提出終止契約，又學生經學校進行就業輔導及媒合，仍無法覓得適合企業接續聘僱者。
- (4) 學生死亡、因重大疾病或意外事故不能繼續就學或就業，經衛生福利部新制醫院評鑑合格之教學醫院以上層級，開立認定無法繼續就學或就業證明者，或因事故致家庭巨變無法繼續就學或就業，經學校查證屬實者。

2. 屬可歸責於學生之原因，應繳還產學獎助金：

- (1) 就學期間因個人因素中途退出專班：如申請轉學、轉系、休學返國，經學校輔導後仍放棄繼續就讀專班、或經學校依學則退學、開除學籍等情形。

- (2) 學生學習表現不佳，未通過學校及企業評核標準，並經學校輔導後仍無改善且依學則處以退學、開除學籍等情形，學生應返還已領之產學獎助金。
- (3) 學生畢業後選擇不至合作企業或相關產業領域就業，或就業後違反公司規定被依法終止勞動契約，並經學校輔導後仍無改善者，學生應返還已領之產學獎助金。
- (4) 學生於合作企業就業期間未滿受領產學獎助金年限：應依其未就業之月數比例繳還產學獎助金；不滿一月者，以一月計。

九、生活津貼說明：

(一)生活津貼：

獎/補助單位	獎/補助項目	獎/補助額度上限	說明
專班 合作企業	生活津貼	學生就學期間，企業每月提供 <u>1 萬元</u> 生活津貼。	實習期間，實習津貼不得低於台灣基本薪資，但，生活津貼與實習津貼擇一領取。
	實習津貼	校外實習期間每人每月提供不低於最低薪資的實習津貼，加班費另計。	畢業後即具有留臺就業義務，提供獎助津貼之企業具有優先留用聘僱學生的權利。

(二)生活津貼繳還原則：

學生如因中途退出專班或畢業後未履約就業，所受領企業生活津貼之繳還原則如下：

1. 屬不可歸責於學生之原因，無須繳還生活津貼：

- (1) 企業若因營運調整，於學生在學期間停止提供學生生活津貼，屬不可歸責於學生之原因，企業不得向學生追回已請領之生活津貼。
- (2) 合作企業因營運調整，於學生畢業時無職缺可聘用。
- (3) 合作企業於學生就業期間有勞動基準法第十四條第一項規定情形，致學生提出終止契約時，學生免償還已受領之生活津貼。
- (4) 學生死亡、因重大疾病或意外事故不能繼續就學或就業，經衛生福利部新制醫院評鑑合格之教學醫院以上層級，開立認定無法繼續就學或就業證明者，或因事故致家庭巨變無法繼續就學或就業，經學校查證屬實並通報企業者，得免履行就業義務及免償還受領之生活津貼。

2. 屬可歸責於學生之原因，得於合約內容載明追回條件情況下，由企業向學生追回生活津貼：

- (1) 就學期間因個人因素中途退出專班：如申請轉學、轉系、休學返國，經學校輔導後仍放棄繼續就讀專班、或經學校依學則退學、開除學籍等情形。
- (2) 學生學習表現不佳，未通過學校及企業評核標準，經學校輔導後仍無改善，致企業不予聘用者。
- (3) 學生畢業後 3 個月內，未至合作企業就業。
- (4) 學生於合作企業就業期間未滿受領生活津貼年限：應依其未就業之月數比例償還生活津貼；不滿一月者，以一月計。