

1. **Program title:** International Industrial Talents Education Special Program (INTENSE Program) in Department of Mechanical and Automation Engineering, two-year bachelor's degree program, taught in English.

**2. Program Features:**

- (1) In response to the demand in Taiwan's mechanical and automation sector, integrating related technologies to cultivate talents, aiming to train International students who have obtained a bachelor's degree.
- (2) The duration of study is two years, belonging to a two-year bachelor's degree program Bachelor degree seeking students. The 4th semester includes an off-campus internship, and graduation requires completing at least 72 credits. before 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 mechanics and automation.
- (4) The collaborating companies offer internship opportunities in related fields such as process engineer, R&D assistant engineer, equipment engineer and maintenance engineer. These companies include Chun Yu Works & Co., Ltd., Chun Zu Machinery Industry Co., Ltd., S-Tech. Corp., and Gloria Material Technology Corp.

3. **Institution:** Taiwan Steel University of Science and Technology/Department of Mechanical and Automation 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	
First Semester	Second Semester	First Semester	Second Semester
General Education: 18 Credits		(Credits/Course hours)	
Basic Mandarin Chinese (6/6)	Advanced Mandarin Chinese (6/6)	Law and Life (2/2)	
		Digital Transformation (2/2)	
		Introduction to Sustainable Development (2/2)	
Compulsory Course: 27 Credits		(Credits/Course hours)	
Computer Graphics (3/3)	Mechanical Drawing (3/3)	Practical Mechatronics Integration (3/3)	Precision Measurement (3/3)
Programmable Logic Controller (3/3)	Mechanisms (3/3)	Automation Mechanism	

		Design(3/3)	
	CAD/CAM Smart Transformation Practice(3/3)	Machine Design Practice (3/3)	
Elective Course: Minimum 16 Credits		(Credits/Course hours)	
Circuit Design Practice for Pneumatics and Hydraulic (3/3)	Computer Aided Engineering (3/3)	Network Supervisor Practice (3/3)	Computer Aided Manufacture (3/3)
Manufacturing Processes (3/3)	Practice for Interface Wiring of Mechatronics (3/3)	Dynamics Study(3/3)	Tooling and Fixture Design (3/3)
Fundamentals and Control of Electric Motor (3/3)	Graphical Control (3/3)	Digital Control (3/3)	Introduction to Microprocessor(3/3)
CNC Integrated Machining (3/3)	Digital Circuit Applications (3/3)	Signal and System (3/3)	PC Based Control and Practice (3/3)
Metal Heat Treatment Practice (3/3)	The Theory and Application of Sensing (3/3)	Interface Control (3/3)	Introduction to Robotics (3/3)
Quality engineering (3/3)	Computer Integrated Smart Transformation Practice (3/3)	Computer-Aided Mechanical Design and Drawing (3/3)	Image Processing (3/3)
Heat Engines (3/3)	CAD/CAM Smart Transformation Practice (3/3)		Corporate Internship (2) (6/20)
General Education		18 credits	
Compulsory course		27 credits	
Elective course		At least 27 credits must be completed (off-campus internship accounts for 12 credits).	
Total minimum credits		72 credits	

### 5. Entry Requirement:

Admission requirement: CEFR English minimum level B1. (Language certification must be ETS certified (TOEIC, IELTS, TOEFL))

### 6. Requirement for graduation:

Credits: 72 credits, including General Education courses 18 credit, compulsory courses totaling 27 credits and elective courses totaling a minimum of 27 credits (off-campus internship accounting for 6 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 scholarship 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 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	Job/Positions		Skill Requirement
1	Chun Yu Works & Co., Ltd.	Process engineer	18	Fastener forming machine and packaging machine operation, fundamental mechanical knowledge
2	Chun Zu Machinery Industry Co., Ltd.	R&D assistant engineer	12	Mechanical drawing and computer drawing, fundamental mechanical knowledge
3	S-Tech. Corp.	Equipment engineer	6	Basic power distribution knowledge and fundamental mechanical knowledge
		Process engineer	6	Production process control and fundamental mechanical knowledge
4	Gloria Material Technology Corp.	Maintenance engineer	18	Basic power distribution knowledge and fundamental mechanical knowledge
<b>Total</b>	4 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	1. Subsidies will be granted based on the actual tuition and miscellaneous fees payable by students to the school, with an annual

Unit	Content	Limit	Note
		enrollment.	maximum subsidy of 100,000 NT dollars (a semester maximum of 50,000 NT dollars).
		Second Year: For student who reach TOCFL A2 or above and after reviewing the scores and performance by the school and collaborating industry, tuition and miscellaneous fee subsidies will be awarded based on merit.	2. A maximum of two years of tuition and miscellaneous fee subsidies will be provided. 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.
University	Study Scholarship	To assist students in studying with peace of mind, our school provides students with a scholarship of 5,000 New 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).	The accommodation fee waiver is only available for those who apply for on-campus accommodation.

## (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：機械與自動化工程系國際產業人才教育專班 一、 兩年制學士專班 一、 英文授課

二、專班特色：

- (一) 因應臺灣機械與自動化領域需求，整合相關技術培育人才，旨在訓練已獲得學士學位的國際學生。
- (二) 修業年限為兩年，屬於二年制學士專班，其中第四學期安排校外實習，畢業需完成至少 72 學分。第二年需要通過華語文能力測驗(TOCFL)達到 A2 基礎級水準。
- (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，培育學生機械與自動化相關知識與實務技能。
- (四) 合作企業提供製程工程師、研發助理工程師、設備工程師、保修工程師等相關領域的實習機會，包括春雨工廠股份有限公司、春日機械工業股份有限公司、精剛精密科技股份有限公司及榮剛材料科技股份有限公司。

三、開班學校/系所/學制：

台鋼科技大學/機械與自動化工程系/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
共同科目:共 18 學分 (學分數/授課時數)			
基礎華語(6/6)	進階華語(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)			
電腦繪圖(3/3)	機械製圖(3/3)	機電整合實務(3/3)	精密量測實務(3/3)
可程式控制(3/3)	機構學(3/3)	自動化機構設計(3/3)	
	CAD/CAM 智慧轉型 實務(3/3)	機械設計實務(3/3)	
專業選修:至少選 27 學分 (學分數/授課時數)			
液氣壓設計實務(3/3)	電腦輔助工程(3/3)	網路監控實務(3/3)	電腦輔助製造(3/3)
電動機原理與控制(3/3)	機電介面配線實務(3/3)	動力學(3/3)	工模與夾具設計(3/3)

CNC 綜合加工(3/3)	圖型監控(3/3)	數位控制(3/3)	微算機原理(3/3)
機械製造(3/3)	數位電路應用(3/3)	訊號與系統(3/3)	PC based 控制與實務(3/3)
金屬熱處理實務(3/3)	感測器技術原理與應用(3/3)	介面控制(3/3)	機器人概論(3/3)
品質工程(3/3)	電腦整合智慧轉型實務(3/3)	電腦輔助機械設計製圖(3/3)	影像處理(3/3)
熱機學(3/3)			企業實習(二)(6/20)
共同科目		18 學分	
專業必修		27 學分	
專業選修		至少修 27 學分(其中校外實習占 6 學分)	
最低畢業學分數		72 學分	

## 五、入學資格：

語言能力要求：學生入學前英語文能力測驗達 CEFR B1 以上(需是ETS之合格證書(TOEIC, IELTS, TOEFL)。

## 六、畢業門檻：

本專班課程安排包括華語課程共同科目 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(包含校外實習選修課程 6 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	春雨工廠股份有限公司	製程工程師	18	扣件成形機、包裝機操作 基本機械常識、
2	春日機械工業股份有限公司	研發助理工程師	12	機械製圖及電腦繪圖、 基本機械常識
3	精剛精密科技股份有限公司	設備工程師	6	基本配電知識、基本機械常識
		製程工程師	6	生產製程管控、基本機械常識
4	榮剛材料科技股份有限公司	保修工程師	18	基本配電知識、基本機械常識

合計	4 家	60 個職缺	
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## 八、獎助金說明：

(一) 錄取學生，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	<p>第一年： 學生入學第一年給予學雜費補助。</p> <p>第二年： 華語文能力測驗(TOCFL)需達 A2 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。</p>	<p>1. 依學生實際應繳交給學校學雜費給予補助，每年補助上限 10 萬元(一學期上限 5 萬元)。</p> <p>2. 最多補助 2 年學雜費。</p> <p>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。</p>
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。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。
	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。	

## (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。