

# 立足台科工程學院,前進全球頂尖學府



## 2+2 大學部國際雙聯學位學程

(2+2 Undergraduate International Double Degree Program)

(營建工程, 機械工程, 化學工程, 材料工程)



# 新南威爾斯大學 (The University of New South Wales (UNSW))



# 新南威爾斯大學 (The University of New South Wales (UNSW))

是澳洲的一所公立研究型大學，其主校區位於新南威爾斯州首府雪梨(距雪梨機場約6公里)。新南威爾斯大學成立於1949年，為世界級研究學府之一。新南威爾斯大學是澳洲八大名校成員，同時也是三個國際著名的研究型大學聯盟組織環太平洋大學聯盟（APRU）、全球科技大學聯盟（英語：Global Alliance of Technological Universities）和Universitas 21（U21）的成員大學之一。UNSW是澳大利亞一所世界頂尖研究型學府。(九個學院，學生人數超過六萬人，教師人員約為三千人)

新南威爾斯大學位居2021年QS世界大學排名全球44位，2021年泰晤士高等教育世界大學排名全球67位，2021年美國新聞與世界報導全球51位，2020年世界大學學術排名全球74位。根據2021年的QS世界大學學科排名，新南威爾斯大學共三個學科位列全球前15名，分別是採礦及礦物工程（第5）、土木及結構工程（第12）和法律（第13）。



**UNSW**  
SYDNEY

新南威爾斯大學因下設澳洲國防學院，故被稱為「戰爭學府」。該校工學院是全澳規模最大工程學院，錄取學生均分極高，其工程與技術類學科在2019年發佈的全球四大排名榜單中均位居全澳第一。

- [生物醫學工程研究所 \(Graduate School of Biomedical Engineering\)](#)
- [化學工程與工業化學系 \(School of Chemical Engineering and Industrial Chemistry\)](#)
- [土木與環境工程學系 \(School of Civil & Environmental Engineering\)](#)
- [計算機科學與工程學系 \(School of Computer Science and Engineering\)](#)
- [電機工程與通訊學系 \(School of Electrical Engineering and Telecommunications\)](#)
- [機械與製造工程學系 \(School of Mechanical and Manufacturing Engineering\)](#)
- [採礦工程學系 \(School of Mining Engineering\)](#)
- [石油工程學系 \(School of Petroleum Engineering\)](#)
- [太陽能電力工程學系 \(School of Photovoltaic Engineering\)](#)
- [測量與空間信息系統學系 \(School of Surveying and Spatial Information Systems\)](#)



# 新南威爾斯大學 (The University of New South Wales (UNSW))

- UNSW vs NTU (台灣大學)

2021年QS世界大學排名**全球44位** (NTU: 66)

2021年QS世界大學排名-**Civil and Structural Engineering**  
**全球排名12位** (NTU: 44)

2021年QS世界大學排名-**Mechanical Engineering**  
**全球排名54位** (NTU: 64)

2021年QS世界大學排名-**Chemical Engineering**  
**全球排名50位** (NTU: 66)

# Taiwan Tech + UNSW (學程規劃)

- Students who have successfully completed two years of *Taiwan Tech's Undergraduate Programs in College of Engineering* may apply to enter the UNSW Bachelor of Engineering (Honours) and be given “advanced standing” typically up to *96 Units of Credit (UoC)*, on the basis of their achievements at Taiwan Tech. (工程學院學生, 至多可用台科課程抵免96個學分數)
- The Taiwan Tech - UNSW Program is expected to involve students studying a total of *four semesters at Taiwan Tech and a minimum of six terms at UNSW*, subject to them satisfying progression requirements at all stages. *Students may commence their studies at UNSW in the third year of the Bachelor of Engineering (Honours) program.* (前二年在台科大, 後二年在UNSW)

# Taiwan Tech + UNSW (申請條件)

- The teaching at UNSW will be conducted in English. Students entering UNSW under this agreement can meet the English language requirement *by providing a medium of instruction letter for their two years of study at Taiwan Tech, College of Engineering.*

(由工程學院提供英文課程之修習證明)

- Successful completion of the first four semesters of approved study at Taiwan Tech with *a minimum GPA of 2.8 out of 4.3* in the courses they studied. (前四個學期之平均GPA至少為2.8/4.3)
- Evidence that the applicant's English language ability meets the UNSW requirement for admission. *(IELTS: 6.5 overall (min. 6.0 in each subtest); 90 overall (min. 23 in writing, 22 in reading, listening and speaking))*

# 營建工程系學生

- 可抵學分數至多96學分
- 必選: 工程圖學/流體力學/工程設計
- 建議以修習英文授課為主  
(替代方案: 雅思/托福)
- 申請資格: GPA>2.8
- 工程學院必須進行資格審查與  
英文能力證明
- 採用預先登錄制度 (大一上時),  
並接受工程學院所安排之教師進行  
輔助指導.

Entering UNSW Bachelor of Engineering (Honours) in Civil Engineering

Taiwan Tech (First Year and Second Year)			UNSW		
Course Code(s)	Course Name	UoC	Course Code	Course Name	UoC
CE162A	Calculus I	4	MATH1131	Mathematics 1A	6
CE162B	Calculus II	4			
CE1507	Basics of Mathematics (I)	0			
CE161A	Physics I	3	PHYS1121	Physics 1A	6
CE173A	Physics Lab I	1			
CE163A	Chemistry I	3	ENGG0011	1 <sup>st</sup> Year Elective	12
CE175A	Chemistry Lab I	1			
CE2006	Engineering Materials	3			
CE1002	<i>Intro to Eng and Eng Ethics</i>	2	ENGG1000	Introduction to Engineering Design and Innovation	6
CE2005	<i>Graphics</i>	2			
CE1006	Statics	3	ENGG1300	Engineering Mechanics	6
CE3000	Engineering Mathematics I	3	MATH1231	Mathematics 1B	6
CE2000	Programming Language	3	ENGG1811	Computing	6
CE2008	Mechanics of Materials	3	ENGG2400	Mechanics of Solids	6
CE2104	Structural Analysis	3	CVEN2303	Structural Analysis	6
CE2113	Soil Mechanics	3	CVEN3202	Soil Mechanics	6
CT3707	Soil Mechanics Test (1)	1			
CT3101	<i>Fluid Mechanics</i>	3	ENGG2500	Fluid Mechanics	6
CE3001	Engineering Mathematics II	3	MATH2019	Engineering Maths 2E	6
XXX	Chinese	6	GENZ2000	General Education	6
XXX	<i>Engineering Design</i>	3	DESN2000	Engineering Design	6
CT3608	Quality Control of Concrete	3	CVEN2101	Engineering Construction	6
CT3902	Material and Structural Test (1)	1			
	<b>Total</b>	<b>61</b>		<b>Total</b>	<b>96</b>

# 機械工程學系

- 可抵學分數至多96學分
- 必選: 數值分析
- 建議以修習英文授課為主  
(替代方案: 雅思/托福)
- 申請資格: GPA>2.8
- 工程學院必須進行資格審查與  
英文能力證明
- 採用預先登錄制度 (大一上時),  
並接受工程學院所安排之教師進行  
輔助指導.

Taiwan Tech (First Year and Second Year)			UNSW		
Course Code(s)	Course Name	UoC	Course Code(s)	Course Name	UoC
CE162A	Calculus I	4	MATH1131	Mathematics 1A	6
CE162B	Calculus II	4			
CE1507	Basics of Mathematics (I)	0			
CE161A	Physics I	3	PHYS1121	Physics 1A	6
CE173A	Physics Lab I	1			
CE163A	Chemistry I	3	ENGG0010	Year 1 Elective	6
CE163B	Chemistry II	3			
CE175A	Chemistry Lab I	1			
CE175B	Chemistry Lab II	1			
CE1002	Intro to Eng and Eng Ethics	2	ENGG1000	Introduction to Engineering Design and Innovation	6
CE2005	Graphics	2			
CE1006	Statics	3	ENGG1300	Engineering Mechanics	6
CE3000	Engineering Mathematics I	3	MATH1231	Mathematics 1B	6
CE2000	Programming Language	3	COMP1511	Programming Fundamentals	6
CE2008	Mechanics of Materials	3	ENGG2400	Mechanics of Solids 1	6
XXX	Numerical Analysis	3	MATH2089	Numerical Methods and Stats	6
CE2106	Thermodynamics	3	MMAN2700	Thermodynamics	6
CE2107	Mechanical Design	3	DESN2000	Engineering Design and Professional Practice	6
CE2111	Manufacturing Processes	3	MMAN2130	Design and Manufacturing	6
CE2112	Mechanical Lab (I) - Materials and Manufacturing	1			
CE161B	Physics II	3	ELEC1111	Electrical and Telecommunications Engineering	6
CE173B	Physics Lab II	1			
CE3005	Fluid Mechanics	3	ENGG2500	Fluid Mechanics for Engineers	6
CE3013	Mechanical Lab (III) – Thermal and Fluid Science	1			
CE3001	Engineering Mathematics II	3	MATH2018	Engineering Mathematics 2D	6
CE2007	Engineering Dynamics	3	MMAN2300	Engineering Mechanics 2	6
	<b>Total</b>	<b>63</b>		<b>Total</b>	<b>96</b>

# 化學工程學系

- 可抵學分數至多96學分
- 必選: 工程圖學/數值分析/靜力學/  
材料科學(I)(II)
- 建議以修習英文授課為主  
(替代方案: 雅思/托福)
- 申請資格: GPA>2.8
- 工程學院必須進行資格審查與  
英文能力證明
- 採用預先登錄制度 (大一上時),  
並接受工程學院所安排之教師進行  
輔助指導.

Taiwan Tech (First Year and Second Year)			UNSW		
Course Code(s)	Course Name	UoC	Course Code	Course Name	UoC
CE162A	Calculus I	4	MATH1131	Mathematics 1A	6
CE162B	Calculus II	4			
CE1507	Basics of Mathematics (I)	0			
CE161A	Physics I	3	PHYS1121	Physics 1A	6
CE173A	Physics Lab I	1			
CE163A	Chemistry I	3	CHEM1811	Engineering Chemistry 1A	6
CE175A	Chemistry Lab I	1			
CE161B	Physics II	3	ENGG0010	Year 1 Elective	12
CE173B	Physics Lab II	1			
CE2009	Materials Science (I)	3			
CE2010	Materials Science (II)	3			
CE163B	Chemistry II	3	CHEM1821	Engineering Chemistry 1B	6
CE175B	Chemistry Lab II	1			
CE1002	Intro to Eng and Eng Ethics	2	ENGG1000	Introduction to Engineering Design and Innovation	6
CE2005	Graphics	2			
CE1006	Statics	3	DESN2000	Engineering Design and Professional Practice	6
CE3000	Engineering Mathematics I	3	MATH1231	Maths 1B	6
CE2000	Programming Language	3	ENGG1811	Computing for Engineers	6
CE202A	Organic Chemistry I	3	CHEM2021	Organic Chemistry	6
CE202B	Organic Chemistry II	3			
CE2110	Material and Energy Balances	3	CEIC2000	Materials and Energy Systems	6
CE201A	Physical Chemistry I	3			
CE2115	Unit Operation and Transport Phenomena (1)	3	CEIC2001	Fluid and Particle Mechanics	6
CE3001	Engineering Mathematics II	3	MATH2018	Engineering Maths 2D	6
XXX	Numerical Analysis	3	MATH2089	Numerical Methods and Stats	6
XXX	Chinese	6	GENZ3500	General Education	6
	<b>Total</b>	<b>70</b>		<b>Total</b>	<b>96</b>

# UNSW 學費及生活費

- 一年學費約為40000澳幣.
- 一年生活費約25000-30000澳幣 (雪梨).
- 澳洲學生簽證 Student visa (Subclass 500), 費用約620澳幣.
- 工讀時數: 每二週40個小時(學生簽證)(法定時薪約為19澳幣)

*就讀3個月以上課程：須申請學生簽證。目前澳洲學生簽證會自動加簽工作簽證，在學期間每兩週可打工40個小時；學期間的長假(寒、暑、春假)則無時數限制。*

- UNSW為三學期制, 分別為: 2月/6月/9月, 一學期共10週. (每學期修3門課; 學習時間彈性, 充份實習機會)
- 第一批學生, 希望能於2022/9月入學(UNSW)

工程科技新紀元, 跨域培力躍國際