

UIUC 3+2 學碩五年說明會



你始終都要洗的！
為什麼不一次洗到最頂？



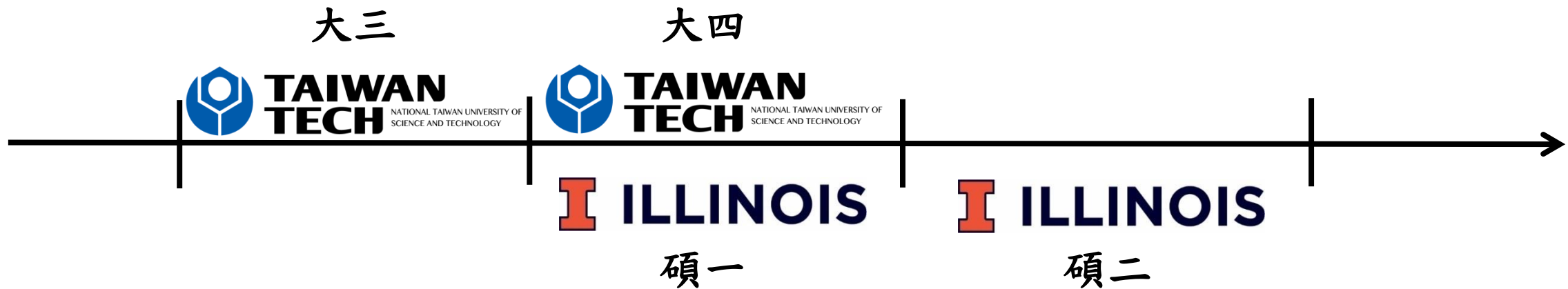
國立台灣科技大學材料系已和University of Illinois Urbana-Champaign (UIUC) 材料系簽訂3+2學碩五年合作計畫。

Academic rankings	
National	
ARWU ^[73]	27
Forbes ^[74]	30
THE / WSJ ^[75]	35
U.S. News & World Report ^[76]	41
Washington Monthly ^[77]	17
Global	
ARWU ^[78]	49
QS ^[79]	64
THE ^[80]	48
U.S. News & World Report ^[81]	72

UIUC 不是一間阿撒布魯大學，UIUC 是一間非常好的學校！



Overview



- 本系學生從大四開始在UIUC材料系就讀碩士班課程，為期兩年。
- 本系規定學生在大三結束前必須完成本系所有**必修**課學分與本校學士畢業所需**通識**學分才能申請此雙聯學制。
- 此學碩雙聯所提供的碩士學位以修課為主，不需要撰寫碩士論文。學制中學生還是可以加入有興趣的實驗室做專題研究(Independent Study)，在正式成績單上會顯示專題研究學分數。
- 碩士學位畢業證書不會有thesis和non-thesis的區別。碩士學位名稱皆為Master of Science。

Course



- 學生必須完成UIUC材料系碩士班畢業學分規定之外，必須額外選修UIUC材料系碩士班材料相關選修課程來抵免學生在本系剩餘的選修學分。
- 原則上以課程代碼MSE 5XX 與 MSE 4XX 課程為主。MSE 595 and 529/559 是seminar和meeting課程，無法抵免。
- UIUC 材料系材料相關選修課程抵免由本系課程委員會認定。學分抵免以一門抵一門，多抵少的方式為原則

M.S. Degree

Requirements	Thesis Option	Non-Thesis Option
Credit Hours	Hours	Hours
Total Credit for the Degree	32	36
Thesis Research - MSE 599	8	n/a
Course Work	24	36
MSE 492 (1 hour); credit does not apply toward the degree	0	0
MSE 595	0-2	0-2
Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)	0-4	0-4

A minimum of 14 500-level credit hours overall applied toward the degree (excluding 599).

The minimum program GPA is 3.0.

Biomaterials

COURSE	DESCRIPTION	CREDIT
MSE 457	Polymer Chemistry	4
MSE 470	Design and Use of Biomaterials	3
MSE 473	Biomolecular Materials Science	3
MSE 474	Biomaterials and Nanomedicine	3
MSE 480	Surfaces and Colloids	4
BIOE 506	Molecular and Cellular Bioengineering	4
CHBE 472	Techniques in Biomolecular Engineering	4
CHEM 530	Structure and Spectroscopy	4
CHEM 590C	Introduction to Chemical Biology	4
MCB 450	Introduction to Biochemistry	3

Polymers/Soft Materials

COURSE	DESCRIPTION	CREDIT
MSE 454	Mechanics of Polymers	3
MSE 455	Polymer Physics	3
MSE 456	Mechanics of Composites	3
MSE 457	Polymer Chemistry	4
MSE 458	Polymer Physical Chemistry	3
MSE 480	Surfaces and Colloids	4
MSE 487	Materials for Nanotechnology	3
MSE 583	Dynamics of Complex Fluids	4
CHEM 584	Introduction to Materials Chemistry	4
PHYS 552	Optical Spectroscopy	4

Ceramics

COURSE	DESCRIPTION	CREDIT
MSE 420	Ceramic Materials and Properties	3
MSE 421	Ceramic Proc. & Microstructure Development	3
MSE 422	Electrical Ceramics	3
MSE 480	Surfaces and Colloids	4
MSE 481	Electron Microscopy & Diffraction	4
MSE 580	Diffraction Physics of Materials	4
MSE 581	Advanced Electron Microscopy	4
MSE 583	Dynamics of Complex Fluids	4
MSE 584	Points and Line Defects	4
CHEM 516	Physical Inorganic Chemistry	4

Computational Materials

COURSE	DESCRIPTION	CREDIT
MSE 485	Atomic Scale Simulations	4
MSE 580	Diffraction Physics of Materials	4
MSE 584	Point and Line Defects	4
ME 471	Finite Element Analysis	4
CS 450	Intro to Numerical Analysis	4
CSE 527	Scientific Visualization	4
CSE 566	Numerical Fluid Dynamics	4
PHYS 486	Quantum Physics	4
PHYS 560	Condensed Matter Physics I	4

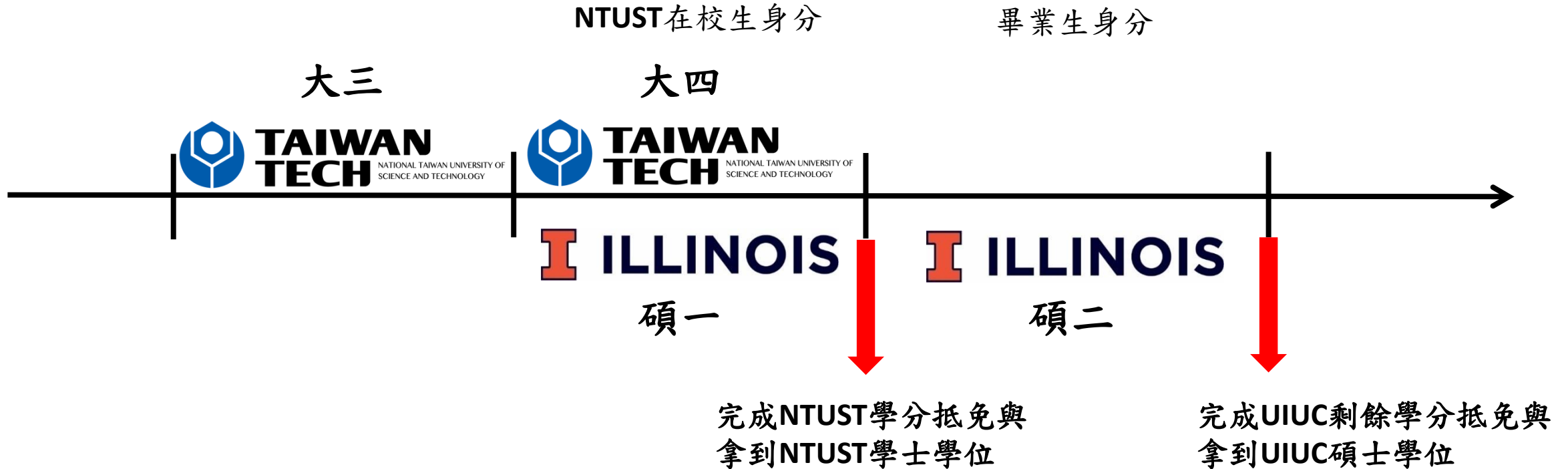
Electronic Materials

COURSE	DESCRIPTION	CREDIT
MSE 487	Materials for Nanotechnology	4
MSE 488	Optical Materials	4
MSE 582	Surface Physics	4
MSE 584	Point and Line Defects	4
ECE 441	Physics & Modeling Semicond. Dev.	3
ECE 444	IC Device Theory & Fabrication	4
ECE 488	Compound Semiconductors & Devices	3
PHYS 460	Condensed Matter Physics	4
PHYS 560	Condensed Matter Physics I	4

Metals

COURSE	DESCRIPTION	CREDIT
MSE 440	Mechanical Behavior of Metals	3
MSE 441	Metals Processing	3
MSE 443	Design of Engineering Alloys	3
MSE 445	Corrosion of Metals	4
MSE 481	Electron Microscopy & Diffraction	4
MSE 487	Materials for Nanotechnology	4
MSE 580	Diffraction Physics of Materials	4
MSE 581	Advanced Electron Microscopy	4
MSE 584	Point and Line Defects	4
TAM 551	Solid Mechanics I	4

Identity and Degree



- 參加此3+2學碩5年之學生，出國研習期間第一年(大四)仍須保有本校在校生身份。
- 本系剩餘選修學分抵免必須在UIUC材料系碩士課程第一年後完成並取得台科大材料系學士學位後才能繼續在UIUC材料系進行碩士班第二年課程。

Living & Tuition Fee



- 參加此3+2學碩5年之學生，出國研習期間第一年(大四)仍須保有本校在校生身份，故大四仍需繳交全額學雜費。
- 學生在UIUC材料系就讀期間需自行負擔兩年的學費與生活費。

2022-2023 Academic Year Graduate & Professional Tuition Rates

Academic Year Tuition Rate for New & Continuing Students

	Residents	Nonresidents/ International
Graduate base	\$13,440	\$29,034
Advertising & Journalism	\$14,244	\$29,838
MS Agriculture & Applied Economics	\$15,440	\$31,034
Business	\$15,956	\$31,550
Chemistry & Life Sciences	\$18,178	\$33,772
Grainger Engineering & Engineering Related	\$19,320	\$36,798
MENG Bioengineering	\$21,320	\$38,798
Fine & Applied Arts	\$14,590	\$30,184
MS Sustainable Urban Management	\$29,614	\$29,614
Information Sciences (entered before Fall 2022)	\$14,292	\$25,192
Information Sciences (entered Fall 2022 or after)	\$14,292	\$25,992
Masters in HRIR (on campus)	\$21,388	\$33,294

Master of Health Administration	\$16,440	\$32,034
Master of Public Health	\$16,440	\$32,034
MS in Health Technology (program total Fall 22, Spring 23 & Summer 23)	\$28,000	\$40,000
MA Speech & Hearing Science	\$13,640	\$29,234
Master of Social Work (MSW-on campus)	\$16,072	\$31,978
MAS in Accountancy (entered before Fall 2022)	\$25,176	\$39,100
MAS in Accountancy (entered Fall 2022 or after)	\$25,804	\$40,080
MS in Business Analytics (entered before Fall 2022)	\$35,000	\$48,000
MS in Business Analytics (entered Fall 2022 or after)	\$35,874	\$49,200
MS in Management (entered before Fall 2022)	\$28,000	\$38,400
MS in Management(entered Fall 2022 or after)	\$28,700	\$39,360
MS in Financial ENG (entered before Fall 2022)	\$47,100	\$47,100
MS in Financial ENG (entered Fall 2022)	\$34,400	\$47,100
MS in Predictive Analytics & Risk Management	\$16,440	\$32,034
Professional Science Masters	\$15,700	\$26,494
Law (Masters of Laws [LLM])	\$49,500	\$49,500
Law (MS of Studies in Law [MSL])	\$49,500	\$49,500
Law (Grad, JSD)	\$49,500	\$49,500

2023-2024 Academic Year Graduate & Professional Estimated Additional Expenses

	Illinois Residents	Nonresidents/International
Campus Fees ¹	\$ 5,308	\$ 5,308
Food & Housing ²	\$14,514	\$14,514
Books & Supplies	\$ 1,800	\$ 1,800
Other ³	\$ 2,750	\$ 3,090
Total Expenses	\$24,372	\$24,712

¹Includes \$2,016 for student health insurance which can be waived at student request and upon University approval.

²Includes Room: Average room rage – Meal Plan: All Classic. For more information visit [University Housing](#).

³Includes allowances for transportation, clothing, recreation, and other living or miscellaneous expenses. These expenses vary greatly based on the individual student's lifestyle, and the allowance is based on what are considered reasonable but modest costs after surveying segments of our student population.

Timetable

學生大三上	
繳交本系審查資料	11月15日止
本系審查作業期間	11月15日~11月30日
公布本系推薦名單	12月初
向UIUC提交本系推薦名單(至多5名)	12月15日
被推薦學生自行在UIUC申請網站申請	1月15日前
UIUC 公布錄取名單	3月15日

本系審查資料為:

歷年成績單及排名；英語檢定成績證明文件；已修課程清單(在本系大學部課程規畫表上做註記)
大三下課程修課規劃；其他有利於審查之證明資料

本系審查注意事項為:

計算申請人歷年平均GPA是否大於3.0。若當學期成績尚未全部出現，就以已經公告的成績計算之。
英文檢定考試成績是否符合標準。(TOEFL成績103分以上或IELTS成績7.5分以上)
檢視已修課程清單和大三下課程規劃確認學生是否能在大三下課程結束修完本系必修課和本校畢業所需通識課。

已修課程清單 (在本系大學部課程規畫表上做註記)

附件一

108 學年第 3 次系課程委員會議修訂

材料科學與工程系大學部課程規畫

學年		第一學年		暑期	第二學年		暑期	第三學年		暑期	第四學年		
		上(24)	下(24)	(3)	上 (甲班 22/乙班 21)	下 (甲班 21/乙班 22)	(3)	上(31)	下(25)	(3)	上(9)	下(9)	
共同課程 (34)		國文 (3)	國文 (3)										
								英文高階課程 (4)					
		英語口語訓練 (上)(2)	英語口語訓練 (下)(2)										
		英文字彙與閱讀 (上)(2)	英文字彙與閱讀 (下)(2)		通識 (2)	通識 (2)		體育 (0)	體育 (0)				
		體育 (0)	體育 (0)		體育 (0)	體育 (0)							
		通識 (2)	通識 (2)		通識 (2)	通識 (4)							
專業 必修 科目 (79)	材 料 系 共 同 必 選	物理(上) (3)	物理(下) (3)		材料實驗(一) (1) (甲班)	材料實驗(一) (1) (乙班)		材料實驗 (二)(1)(甲班) / 材料實驗 (三)(1)(乙班)	材料實驗 (二)(1)(乙班) / 材料實驗 (三)(1)(甲班)				
		物理實習(上) (1)	物理實習(下) (1)		應用力學 (7)	材料力學 (3)		材料物理性質 (3)					
		化學(上) (3)	化學(下) (3)		材料熱力學 (3)			結晶與繞射導 論 (3)					
		化學實習(上) (1)	化學實習(下) (1)		有機化學 (3)	高分子導論 (3)		實務專題(上) (2)	實務專題(下) (2)				

Application Package

The following requirements must be submitted for an applicant to be considered for admission and financial support.

- 1 Transcripts and certificates of degree*
- 2 One-page statement of purpose**
- 3 Resume
- 4 Three letters of reference
- 5 GRE Score ***GRE is optional (waived) for Fall 2023 admissions.** For more information see here [/frequently-asked-questions/GRE](#)
- 6 TOEFL and/or IELTS score ([international students only](#))
- 7 Non-refundable application processing fee (\$70 domestic/\$90 international)
At this time, our department does not provide application fee waivers. However, the application fee may be waived in some instances. Please see here: <https://grad.illinois.edu/application-fee> for more information about the application fee requirements, fee waivers and eligibility. **International** applicants are not eligible for an application fee waiver unless coming under a valid exchange agreement that has an approved application fee waiver.

*Final or original transcripts will only be required if admission is offered.

****One combined** academic statement of purpose (1000 words) and personal statement (500 words)

Please use the Academic Statement of Purpose to describe (within 1000 words): (1) the substantive scholarly question you are interested in exploring in graduate study, (2) your academic background, intellectual interest, and any training, research, or other experiences that have prepared you for graduate study, (3) how our program would help you achieve your intellectual goals, (4) any specific faculty members, if applicable, whose research interests align with your own interests, and (5) your professional goals.

Please use the Personal Statement to describe (within 500 words) how your personal background and experiences influenced your decision to pursue a graduate degree. Provide insight on your potential to contribute to a community of inclusion, belonging, and respect in which scholars with diverse backgrounds, perspectives, abilities, and experiences can learn and collaborate productively and positively together.

The University of Illinois institution code for reporting test scores is 1836. International applicants receiving financial assistance from the Department are not required to complete the Financial Certification Form. International applicants who are admitted with outside financial assistance (government scholarships, corporate support, or personal funds) are required to submit the [Financial Certification Form](#). Find more information and details regarding [evidence of financial resources for international applicants](#) on the university Graduate website.

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被推薦學生自行在UIUC申請網站申請	1月15日前
UIUC 公布錄取名單	3月15日

英文暫時達不到標準?

- 鼓勵申請，如果對方願意錄取你，可以延後補英文檢定成績或是上UIUC的語言學校
- 最後錄取名額和名單完全由UIUC材料系決定
- Dcard 留學版
- 寄托天下 <https://bbs.gter.net/>
- Chase Dream.com



教育部留學貸款

https://depart.moe.edu.tw/ed2500/Content_List.aspx?n=E0E936B8395696D7

教育部公費留學

https://depart.moe.edu.tw/ed2500/Content_List.aspx?n=67BD8E03DCFE9837

台科大選送優秀學生境外研習獎學金
<https://www.oia.ntust.edu.tw/p/405-1060-86168,c9060.php?Lang=zh-tw>

你想站在機台上俯瞰整個世界？



還是在火箭發射塔上俯瞰整個世界？



Man of Focus, Commitment and Sheer Will

