

國立交通大學資訊工程學系「金融科技跨域學程」實施要點

National Chiao Tung University Department of Computer Science

Implementation Guidelines for Cross-Disciplinary Program of Financial technology

- 資訊工程學系 107 學年度第 3 次課程委員會修訂(107 年 10 月 05 日)
- 資訊學院 107 學年度第 1 次教學與課程委員會修訂(107 年 11 月 13 日)
- 107 學年度第 2 次教務會議核備(107 年 12 月 27 日)
- 資訊工程學系 108 學年度第 11 次課程委員會修訂(109 年 4 月 16 日)
- 資訊學院 108 學年度第 4 次教學與課程委員會修訂(109 年 5 月 19 日)
- 108 學年度第 4 次教務會議核備(109 年 6 月 16 日)
- 資訊工程學系 109 學年度第 3 次課程委員會修訂(109 年 11 月 2 日)
- 資訊學院 109 學年度第 1 次教學與課程委員會修訂(109 年 11 月 17 日)
- 109 學年度第 2 次教務會議核備(109 年 12 月 28 日)
- 資訊工程學系 109 學年度第 7 次課程委員會修訂(110 年 3 月 16 日)
- 資訊學院 109 學年度第 2 次教學與課程委員會修訂(110 年 4 月 16 日)
- 109 學年度第 1 次校級課程委員會通過(110 年 5 月 14 日)
- 109 學年度 2 次教務會議核備通過(110 年 5 月 26 日)

- 一、依據國立交通大學跨域學程實施辦法，國立交通大學資訊工程學系(以下簡稱本系)為鼓勵學生進行跨領域學習，建立跨域學習深度，協助學生拓展第二專長，提供學生可以在畢業學分不增加(或僅少量增加)情況下，修畢跨域學程，特訂定本實施要點。

These Implementation Guidelines are prescribed by National Chiao Tung University Department of Computer Science (hereinafter referred to as Our Department) based on NCTU Cross-Disciplinary Program Implementation Regulations to provide the opportunity for students to proceed cross-disciplinary learning without increasing graduate credits (or only a few extra credits) in order to encourage students to conduct cross-disciplinary study, build the depth of cross-disciplinary study, and assist students to expand second specialty.

- 二、依據國立交通大學跨域學程實施辦法，本系學生修習「金融科技跨域學程」(以下簡稱本學程)，於修畢後可於畢業證書上加註「金融科技」為跨域專長。

According to NCTU Implementation Guidelines for Cross-Disciplinary Program, students in CS department could be remarked as “Financial technology” on the diploma once they complete this program.

三、本要點實施細節

1. 適用對象：本校資訊工程學系申請金融科技跨域學程的學生適用本要點。

2. 申請程序：

- (1) 本系學生欲修習本學程者得於每學年下學期向本系提出申請，經本系及資訊管理與財務金融學系課程委員會審查通過後，方可修習本學程。
- (2) 本學程的課程列示於『資訊工程學系「金融科技跨域學程」必修科目表』，其課程包含：校定必修(含共同必修26學分)，基礎學科14學分，必修31學分，學程選修12學分，本系必修及主題學程課程(參閱本系必修科目表)，本系專業選修課程(至少9學分)(需修本系所開授的各專業科目，含大學部、研究所選修課程)，以及金融科技跨域模組(31學分)，畢業學分至少128學分。本系甲組選擇跨域學程為畢業條件者，依

本系必修科目表規定。

- (3) 修習本學程之學生，若無法完成(2)中所規定之課程，可回復修習原資訊工程學系的學士學位課程。

Guidelines in detail

- 1) People applicable to this program: undergraduate students who are Department of Computer Science apply for Cross-Disciplinary Program of Financial technology .
- 2) Procedure to apply for this program:
 - (I) Students may submit applications to the CS department during the second semester of every year. The application will be evaluated by the Curricular Committees at the CS and the IMF departments, respectively. Students are enrolled in the cross-disciplinary program only after their applications have been approved by both sides.
 - (II) Courses included in this program are listed on “The Required Course List for the students at our department study cross-disciplinary program of Financial technology”. Courses are classified as:
 - Required courses of the university: 26 credits.
 - Core curriculum at CS department: 66 credits.
 - Cross-disciplinary program module courses of Financial technology: 31 credits.At least 128 credits are required for graduation.
 - (III) For students at our department who study for cross-disciplinary program but are not able to complete the program, they shall give up the cross-disciplinary program and transfer to study for the bachelor degree program at the original department of Computer Science.

四、本系指定一名專任教師擔任跨域學程導師，與資訊管理與財務金融學系的跨域學程導師組成導師群，專責輔導跨域學程的學生。

Our department assigned one full-time teacher to be the mentor of the cross-disciplinary program and formed mentor group with teachers of cross-disciplinary program at other department or college to give guidance to cross-disciplinary program students.

五、本要點如遇修訂，須主動知會資訊管理與財務金融學系。

CS department should notify IMF department if the guidelines need to be revised.

六、本要點如有未盡事宜，悉依本校學則及其他相關規定辦理。

If there is any unaccomplished matter of these guidelines, it shall be handled in accordance with the school constitution of our university as well as other relevant regulations.

七、本要點經校級課程委員會通過並提教務會議核備後實施，修訂時亦同。

These guidelines were approved by Curricular Committee at university level and then submitted to the Council of Academic Affairs for approval-for-reference before putting it into practice; the same shall be done upon any amendment thereto.

資訊工程學系「金融科技跨域學程」必修科目表

Courses for CS Department

Cross-disciplinary Program of Financial technology

類別 Category	選別 Classification	科目名稱 Courses	學分 Credits		開課系所 Dept.	備註 Remarks
			上學期 Fall Semester	下學期 Spring Semester		
本系學分 (92 學分) Core curriculum at our department (92 credits)	<p>校定必修(含共同必修 26 學分)，基礎學科 14 學分，必修 31 學分，學程選修 12 學分，本系必修及主題學程課程(參閱本系必修科目表)，本系專業選修課程(至少 9 學分)(需修本系所開授的各專業科目，含大學部、研究所選修課程)</p> <p>備註：可以「金融科技跨領域專題(一)(二)」申請免修「資訊工程專題(一)(二)」。</p> <p>University Compulsory Courses = 26 credits Basic Science = 14 credits Compulsory courses = 31 credits Elective Program Courses = 12 credits Elective Professional Courses = 9 credits (All elective courses offered by the Dept. of CS (including elective courses in both undergraduate and graduate programs))</p> <p>Note : Cross-disciplinary Project (I) (II) can be exempted from Computer Science and Engineering Projects(I)(II). Credits can be replaced by other courses offered in the Computer Science Department.</p>					
金融科技跨域 模組 (31 學 分) 修畢於畢業證 書加註『跨域 專長：金融科 技』 Cross- disciplinary modules at other department (31 credits) Could be remarked as “Cross- Disciplinary Specialty : Financial technology” on the diploma	共同必修 (10 學分) Compulsory Courses (10 credits)	投資學 Investment		3	資財 IMF	
		金融科技跨領域專 題(一)(二) FinTech Cross- disciplinary Projects (I) (II)	2	2	資工/ 資財 CS/IMF	可以資工系 「資訊工程 專題 (一)(二)」申 請免修
		企業講座 Seminar on Business		3	資工/資 財 CS/IMF	詳細課程名 稱依當學期 公告。
	財務金融模組 (9 學分) Financial technology modules (9 credits) 右列課程 四選三	經濟學概論 Introduction to Economics	3		資財 IMF/通 識中心	可以管理學 院共同課程 「經濟學 (一)或(二)」 或通識教育 中心「經濟 學原理」申 請抵免
	金融科技概論 Introduction to Financial Technology	3			資財 IMF	
	期貨與選擇權 Futures and Options	3			資財 IMF	
財務管理 Financial		3		資財 IMF		

		Management			
選修 (12 學分) Elective Courses (12 credits)	數理統計 Mathematical Statistics	3	資財 IMF		
	財務工程導論 Introduction in Financial Engineering	3	資財 IMF		
	財務計量經濟學 Financial Econometrics	3	資財 IMF		
	系統分析與設計 System Analysis and Design	3	資財 IMF		
	商用資料通訊 Business Data Communications	3	資財 IMF		
	貨幣銀行與金融風 暴 Money, Banking , and Financial Crisis	3	資財 IMF		
	國際財務管理 Multinational Business Finance	3	資財 IMF		
	財務風險管理 Financial Risk Management	3	資財 IMF		
	資訊安全 Information Security	3	資財 IMF		
	資料科學 Data Science	3	資財 IMF		
	人工智慧與金融科 技實務 Practices of Artificial Intelligence and Financial Technology	3	資財 IMF		
	財務報表分析 Financial Statement Analysis	3	資財 IMF		
	人工智慧 Artificial Intelligence	3	資工 CS		
	資料探勘 Data Mining	3	資工 CS		

		電腦安全總整與實 作 Computer Security Capstone	3	資工 CS	
		資料視覺化與視覺 分析 Data Visualization and Visual Analytics	3	資工 CS	
		巨量資料分析技術 與應用 Big Data Analytics Techniques and Applications	3	資工 CS	
		資料庫系統概論 Intro. to Database Systems	3	資工 CS	
		人工智慧概論 Intro. to Artificial Intelligence	3	資工 CS	
		機器學習概論 Intro. to Machine Learning	3	資工 CS	
		人工智慧總整與實 作 Artificial Intelligence Capstone	3	資工 CS	
		計算機網路概論 Intro. to Computer Networks	3	資工 CS	
		密碼學概論 Intro. to Cryptography	3	資工 CS	
		網路程式設計概論 Intro. to Network Programming	3	資工 CS	
		數值方法 Numerical Methods	3	資工 CS	
	校必修 Common Required Courses		26	校必修：含共同必修 26 學分（含外語課程 必修 8 學分），至多採 計 40 學分 Required courses of the university (including 26 credits of general education subjects, 8 credits of foreign language course inclusive with the maximum 40 credits countable)	

最低畢業學分 Minimum Credits Required for Graduation	128	
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備註：資工系重要課程擋修制度請參閱本系學士班修業辦法。