

國立陽明交通大學工業工程與管理學系 跨域學程實施要點

National Yang Ming Chiao Tung University
Department of Industrial Engineering and Management
Implementation Guidelines for Cross-Disciplinary Program

110.10.12 110學年度第1次系課程委員會修訂通過
110.11.04 110學年度管理學院第2次院課程委員會通過
110.12.02 110學年度第3次校課程委員會通過
110.12.16 110學年度第2次教務會議核備通過
111.03.09 111學年度第3次系課程委員會修訂通過
111.04.14 111學年度管理學院第3次院課程委員會通過
111.05.13 111學年度第5次校課程委員會通過
111.06.16 111學年度第4次教務會議核備通過

- 一、依據國立陽明交通大學跨域學程實施辦法，國立陽明交通大學工業工程與管理學系（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，特訂定本要點。

Article One These Implementation Guidelines are prescribed by National Yang Ming Chiao Tung University Department of Industrial Engineering and Management (hereinafter referred to as Our Department) based on NYCU 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、依據國立陽明交通大學跨域學程實施辦法，跨域學程係指由本校各學系、研究所、或學院提出模組課程，模組課程應包含該領域基礎核心知識，且總學分數以30學分為原則(最低可為28學分，最高不可超過32學分)，學生修習跨域學程，其課程將包含所屬學系的跨域學程模組課程以及第二專長系所或學院的跨域學程模組課程，並可於畢業證書上加註第二專長模組課程為跨域專長。

Article Two The cross-disciplinary program here means the cross-disciplinary module curriculum proposed by the departments, institutes or colleges in National Yang Ming Chiao Tung University. Module curriculum should include the core knowledge curriculum of the field and the total credits will be based on 30 credits (the minimum 28 credits and no more than 32 credits). The cross-disciplinary program that students take will include the cross-disciplinary program module curriculum of the department they belong to as well as the cross-disciplinary program module curriculum from the second specialty department or college. The

module curriculum of the second specialty could be remarked as “Cross-Disciplinary Specialty” on the diploma.

三、本要點實施對象

Article Three Implementation objects of these Guidelines

1. 本系學生欲修習跨域學程者

For the student of our department who would like to take cross-disciplinary program

- (1) 得於每學年度公告申請期限內向本系提出申請，申請時註明欲申請的第二專長系所或學院，申請期限將由本系課程委員會提前一個月進行公告，公告中說明需準備的審查資料以及當年度本系開放給本系學生修讀跨域學程的名額，申請案經本系課程委員會審查通過後，需送到第二專長系所或學院審查，通過雙邊審查後，方可進入跨域學程。

The application could be submitted to our department within the dates of annual announcements by faculty. The department or college of the second specialty that the student would like to apply for must be remarked on the application form, and the application deadline would be announced one month in advance by the Curricular Committee at our department. The information of evaluation documents needed to be prepared as well as the quota opened to the students of our department to study for this program in the given year will be released on the announcement. The application should be sent to the department or college of the second specialty for evaluation after it is approved by the Curricular Committee at our department. Students could only take the cross-disciplinary program after evaluation by both sides.

- (2) 本系學生修習跨域學程的課程，列示於「工業工程與管理學系跨域學程本系學生必修科目表」，其課程包含：校必修、本系基礎必修課程、本系跨域模組課程，以及第二專長系所或學院的跨域模組課程(以下簡稱他系跨域模組課程)，畢業學分以128學分為原則。他系跨域模組課程認定為跨域專長，於畢業證書本系名稱後加註此跨域專長。

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 Industrial Engineering and Management.

- (3) 本系學生修習跨域學程，若無法修畢跨域學程課程，得選擇放棄跨域學程，改修習原工業工程與管理學系的學士學位課程。

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 Industrial Engineering and Management.

2. 外系學生欲修習跨域學程且選擇本系做為其跨域專長者

For students of other departments who would like to study for cross-disciplinary

program and choose our department as their cross-disciplinary specialty

- (1) 得於每學年度公告申請期限內向其所屬學系（以下簡稱原系）提出申請，通過原系以及本系的雙邊審查後，方可進入跨域學程。

They could submit the application to the department that they belong to within the dates of annual announcements by faculty, they could only take the cross-disciplinary program after approved by both their original department and our department.

- (2) 外系學生修讀跨域學程且選擇本系做為其跨域專長者，其課程包含：校必修、原系基礎必修課程、原系跨域模組課程，以及列示於「工業工程與管理學系跨域模組課程必修科目表」的模組課程，畢業學分以128學分為原則，並於畢業證書原系名稱後加註工業工程為其跨域專長。

The courses for the students of other departments who would like to study for cross-disciplinary program and choose our department as their cross-disciplinary specialty include required courses of the university, core curriculum at their original department, cross-disciplinary module curriculum at their original department, and the module curriculum listed on “The Required Course List for the students study cross-disciplinary module curriculum in department of Industrial Engineering and Management” with at least 128 graduate credits. The “Industrial Engineering” will be remarked as their cross-disciplinary specialty after the title of their original department on the diploma.

四、 本系指定一名專任教師擔任跨域學程導師，與外系所或學院的跨域學程導師組成導師群，專責輔導跨域學程的學生。

Article Four 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、 為鼓勵不同系所或學院合作提出跨域共授課程，兩位以上教師開授跨領域之創新整合式課程，得依本校教師授課鐘點核計原則第9條第6款規定，教師的授課鐘點數可按到場時數計，但以開課前該門課程實際簽呈為依據。

Article Five In order to encourage different departments or colleges working together for the proposal of cross-disciplinary curriculum, the number of teaching hours for the innovating integrated curriculum offered by more than two teachers could be calculated by the actual time of teaching according to Subparagraph 6, Article 9 of National Yang Ming Chiao Tung University Teaching Hours Accounting Principle; however, it will be in accordance with the official approval of the curriculum before the course starts.

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。

Article Six 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。

Article Seven 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.

本法規有中英文兩個版本，在有疑義的情況下以中文版為準。

The Regulations were drawn up in Chinese and translated into English. In the event of any discrepancy between the two versions, the original Chinese version shall prevail.

工業工程與管理學系跨域學程 本系學生 必修科目表 (A)

The Required Course List for the students at our department study cross-disciplinary program in Department of Industrial Engineering and Management

類別 Category	科目名稱 Course Name	學分 Credit	開課系所 Department	備註 Remark
本系基礎必修 (46 學分) Core curriculum at our department (46 credits)	微積分(一)(二) Calculus(I)(II)	6	微積分小組 Calculus Teaching Group	
	計算機概論 Introduction to Computer Science	3	管理學院 College of Management	院共同必修 Common Required Course of College
	程式設計 Programming	3	管理學院 College of Management	院共同必修 Common Required Course of College
	經濟學(一)(二) Economics(I)(II)	6	管理學院 College of Management	院共同必修 Common Required Course of College
	會計學(一)(二) Accounting(I)(II)	6	管理學院 College of Management	院共同必修 Common Required Course of College
	線性代數 Linear Algebra	3	管理學院 College of Management	院共同必修 Common Required Course of College
	管理學 Management	3	管理學院 College of Management	院共同必修 Common Required Course of College
	統計學(一) Statistics(I)	3	管理學院 College of Management	院共同必修 Common Required Course of College
	工業工程與管理概論 Introduction to Industrial Engineering and Management	3	工工系 Dept. of IEM	
	模擬學 Simulation	3	工工系 Dept. of IEM	
	工程圖學 Engineering Graphics	1	工工系 Dept. of IEM	
	資料庫管理 Database Management	3	工工系 Dept. of IEM	院基礎課程 Core Course of College
	服務學習(一)(二) Student Service Education(I)(II)	0	工工系 Dept. of IEM	
	行銷學 Principles of Marketing	3	管科系 Dept. of MS	五門任選一門 At least 1 from the 5 courses
	人力資源管理 Human Resource Management		管科系 Dept. of MS	
	財務管理 Financial Management		資財系 Dept. of IMF	
	管理資訊系統 Management Information System		資財系 Dept. of IMF	
	物流運籌管理 Logistic Management		運管系 Dept. of TLM	
本系跨域模組 (32 學分) [註 1]	作業研究(一)(二) Operations Research(I)(II)	6	管理學院 College of Management	院共同必修 Common Required Course of College
	統計學(二)	3	管理學院	院共同必修

Cross- disciplinary modules at our department (32 credits) [Note 1]	Statistics(II)		College of Management	Common Required Course of College
	工作研究 Work Study	3	工工系 Dept. of IEM	
	生產與作業管理 Production and Operation Management	3	工工系 Dept. of IEM	
	人因工程 Human Factors Engineering	3	工工系 Dept. of IEM	
	製造程序 Manufacturing Processes	3	工工系 Dept. of IEM	
	工程經濟 Engineering Economics	3	工工系 Dept. of IEM	
	品質管理 Quality Control	3	工工系 Dept. of IEM	
	設施規劃 Facility Planning	3	工工系 Dept. of IEM	
	工業工程與管理實務 Practice on Industrial Engineering and Management	2	工工系 Dept. of IEM	
他系跨域模組 (28-32 學分) Cross-disciplinary modules at other department (28-32 credits)	本校各系所或學院所提供之跨域模組學程，擇一修畢 The cross-disciplinary modules offer by departments or colleges at our university; choose one to complete.	28-32		
合計 Total			校必修（含共同必修 24 學分，至多採計 40 學分）[註 2] Required courses of the university (including 24 credits of general education subjects, 8 credits of foreign language course inclusive with the maximum 40 credits countable) [Note 2]	
最低畢業學分 Minimum Graduate Credits		128		

註 1：(A) 表中之本系跨域模組 = (B) 表

Note 1: The cross-disciplinary modules at our department on list (A) = list (B)

註 2：本校共同必修科目表規定，外語課程必修至少 6 學分。如大學部學生修習共同必修學分數超過 24 學分以上，本校至多可採至 40 學分於最低畢業學分內，但各學系另有規定者，從其規定。

Note 2: According to the rules prescribed by Table of General Education Subject of our university, at least 6 credits of foreign language courses must be taken. For the students in the bachelor degree program who study general education subjects more than 24 credits, our university could calculate 40 credits to the minimum graduate credits; please follow the regulations from each department if it is specially defined.

工業工程與管理學系 跨域模組課程 必修科目表 (B)

The Required Course List for the students study cross-disciplinary module curriculum
in department of Industrial Engineering and Management

類別 Category	選別 Type	科目名稱 Course Name	學分 Credit	開課系所 Department	備註 Remark
本系跨域模組 (32 學分) Cross-disciplinary modules at our department (32 credits) 修畢於 畢業證書 加註「跨域專 長：工業工 程」 It could be remarked as “Cross- Disciplinary Specialty: Industrial Engineering” on the diploma after the module curriculum is completed.	必修 Required	作業研究(一)(二) Operations Research(I)(II)	6	管理學院 College of Management	若本課程為原系所必修課程， 須再選修下列課程以補足 32 學分。 Students must take the elective courses in order to complete 32 credits if the courses “Operations Research(I)(II)”are required in their original department.
		統計學(二) Statistics(II)	3	管理學院 College of Management	若本課程為原系所必修課程， 須再選修下列課程以補足 32 學分。 Students must take the elective course in order to complete 32 credits if the course “Statistics(II)” is required in their original department.
		生產與作業管理 Production and Operation Management	3	工工系 Dept. of IEM	若本課程為原系所必修課程， 須再選修下列課程以補足 32 學分。 Students must take the elective course in order to complete 32 credits if the course “Production and Operation Management” is required in their original department.
		工作研究 Work Study	3	工工系 Dept. of IEM	
		人因工程 Human Factors Engineering	3	工工系 Dept. of IEM	
		製造程序 Manufacturing Processes	3	工工系 Dept. of IEM	
		工程經濟 Engineering Economics	3	工工系 Dept. of IEM	
		品質管理 Quality Control	3	工工系 Dept. of IEM	
		設施規劃 Facility Planning	3	工工系 Dept. of IEM	
		工業工程與管理實務 Practice on Industrial Engineering and Management	2	工工系 Dept. of IEM	
	選修 Elective	工業工程與管理概論 Introduction to Industrial Engineering and Management	3	工工系 Dept. of IEM	
		工程圖學 Engineering Graphics	1	工工系 Dept. of IEM	
		模擬學 Simulation	3	工工系 Dept. of IEM	
		資料庫管理 Database Management	3	工工系 Dept. of IEM	

		全球運籌管理 Global Logistics Management	3	工工系 Dept. of IEM	
		資訊社會衝突與決策 Conflicts and decisions in information society	3	工工系 Dept. of IEM	
		精實企業管理 Lean Enterprise Management	3	工工系 Dept. of IEM	
		情境智能 Ambient Intelligence	3	工工系 Dept. of IEM	
		基因演算法與管理科學 應用 Genetic Algorithm and Applications in Management Science	3	工工系 Dept. of IEM	
		認知與組織人因工程 Cognitive and Organizational Ergonomics	3	工工系 Dept. of IEM	
總學分 Total Credits (32 credits)			32		