

國立陽明交通大學醫學系「智慧健康照護跨域學程」實施要點

National Yang Ming Chiao Tung University School of Medicine

Implementation Guidelines for Cross-disciplinary Program of Smart Health Care

110年10月12日醫學系教學發展委員會議通過
110年10月19日醫學系課程委員會議通過
110年12月2日校課程委員會議通過
110年12月16日教務會議核備通過
111年3月29日醫學系課程委員會議通過
111年5月13日校課程委員會議通過
111年6月16日教務會議核備通過
111年11月3日醫學院課程委員會議通過
111年11月28日校課程委員會議通過
112年3月7日教務會議核備通過
112年3月28日醫學系課程委員會議通過
112年3月30日醫學院課程委員會議通過
112年5月16日校課程委員會議通過
112年5月30日教務會議核備通過
114年3月31日醫學系課程委員會議通過
114年4月1日醫學院課程委員會議通過
114年5月12日校課程委員會議通過
115年4月7日醫學系課程委員會議通過
115年4月13日醫學院課程委員會議通過
115年5月14日校課程委員會議通過

一、依據國立陽明交通大學跨域學程實施辦法，國立陽明交通大學醫學系(以下簡稱本系)為鼓勵學生進行跨領域學習，強化跨域學習深度，協助學生拓展第二專長，特訂定本實施要點。

I. These Implementation Guidelines are prescribed by National Yang Ming Chiao Tung University School of Medicine (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 with a few extra credits in order to encourage students to conduct cross-disciplinary study, build the depth of cross-disciplinary study, and assist students in expanding second specialty.

二、依據國立陽明交通大學跨域學程實施辦法，本系學生修習「智慧健康照護跨域學程」(以下簡稱本學程)，於修畢後可於畢業證書上加註「智慧健康照護」為跨域專長。

II. According to NYCU Implementation Guidelines for Cross-Disciplinary Program, students in School of Medicine could be remarked as “Smart Health Care” on the diploma once they complete this program.

三、本要點實施細節

1. 適用對象：本系 104 學年度 (含) 之後入學之學士班學生均適用本要點。

2. 申請程序：

本系學生欲修習本學程者得於每學期提出申請，經本系、護理學系及資訊工程學系審查通過後，方可修習本學程。

3. 修業規定：

(1) 本系學生選修本跨域學程者，畢業學分至少 241 學分，包含全校共同必修科目，本系必修科目與學分數請參考各組各學年度之必修科目表與施行細則。

(2) 本跨域學程的課程列示於「醫學系『智慧健康照護跨域學程』必修科目表」，其課程包

含：共同必修 6 學分、資訊工程模組必修 9 學分、及選修至少 15 學分(資工系課程至少選 9 學分)，共至少需修畢 30 學分。

- (3) 修畢本學程之本系學生可免修「科學發表與思維」、「計算機概論」之本系必修課；若無法完成(2)中所規定之課程，可回復修習原醫學系的學士學位課程，惟須補足「科學發表與思維」、「計算機概論」之本系必修學分。

III. Guidelines in detail

1. People applicable to this program: undergraduate students enrolled at Our Department in or after 2015.
2. Procedure to apply for this program:
Students may submit applications to Our Department during each semester every year. The application will be evaluated by the Curricular Committees at the Our Department, Nursing, and CS departments respectively. Students can be enrolled in the cross-disciplinary program only after their applications have been approved by tripartite sides.
3. Regulation for the program:
 - a) At least 241 credits (general courses included) are required for graduation. As for the compulsory courses and credits of Our Department, please refer to the lists of compulsory courses and regulation for each group of each academic year.
 - b) Courses included in this program are listed on “Course for the students of School of Medicine Cross-disciplinary Program of Smart Health Care”. Courses are classified as:
Common Compulsory courses: 6 credits
Computer Science Module courses: 9 credits
Elective courses: at least 15 credits (CS courses: 9 credits at least).
At least 30 credits are required to complete the cross-disciplinary program of Smart Health Care.
 - c) For students at Our Department who complete the cross-disciplinary program of Smart Health Care, the courses of “Scientific Presentation and Thinking” and “Introduction to Computer Science” can be waivable. For students at Our Department who study cross-disciplinary program but are not able to complete the program, they shall return to take credits of the bachelor degree program at their original Department and also need to make up the credits of “Scientific Presentation and Thinking” and “Introduction to Computer Science” courses.

四、本系指定一名專任教師擔任跨域學程導師，與護理學系、資訊工程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。

- IV. 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 departments to give guidance to cross- disciplinary program students.

五、本要點如遇修訂，須主動知會護理學系及資訊工程學系。

- V. Our department should notify the CS and Nursing departments 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。

- VI. 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後實施，修訂時亦同。

- VII. The Guidelines were approved by Curricular Committee at university level before putting it into practice; the same shall be done upon any amendment thereto.

醫學系「智慧健康照護跨域學程」必（選）修科目表
Courses for the students of School of Medicine
Cross-disciplinary Program of Smart Health Care

類別 Category		科目名稱 Courses	學分 Credits	開課系所 Dept.	備註 Remark
共同必修 (6學分) General courses (6 credits)	核心	健康照護數位轉型講座 Digital transformation in health care	2	醫學系/ 護理系/ 資工系	詳細課程名稱依當學期公告 Detailed subject name will be announced each semester
	進階 應用	照護科技跨域專題(I) Smart Health Care Cross-Disciplinary Projects (I)	2	醫學系/ 護理系/ 資工系	
		照護科技跨域專題(II) Smart Health Care Cross-Disciplinary Projects (II)	2	醫學系/ 護理系/ 資工系	
資訊工程 模組必修 (9學分) 9 credits	基礎	計算機概論與程式設計 Introduction to Computers and Programming	3	資工系	
		資料結構與物件導向程式設計 Data Structures and Object-oriented Programming	3	資工系	
		演算法概論 Introduction to Algorithms	3	資工系	
		基礎程式設計 Basic Programming	0	資工系	本課程及格條件為通過「程式能力鑑定」 Pass=Passing Basic Computer Programming Exam
選修 (至少 15 學分) Elective courses (15 credits at least)	基礎	護理學導論 Introduction to Nursing	2	護理系	
	核心	公共衛生概論 Introduction to Public Health	1	醫學系	1.「醫療與社會人文」與「進階公共衛生議題」為領域課程; 詳細課程名稱依當學期公告 2.資工系課程:至少選9學分 CS courses: 9 credits at least
		醫事法律 Medical Laws & Regulations	1	醫學系	
		醫療經濟學 Health Economics	2	醫學系	
		醫療與社會人文 Medical Humanity and Social Science	2	醫學系	
		離散數學 Discrete Mathematics	3	資工系	

	線性代數 Linear Algebra	3	資工系
	作業系統概論 Introduction to Operating Systems	3	資工系
	計算機組織 Computer Organization	3	資工系
	數位電路設計 Digital Circuit Design	3	資工系
	影像處理概論 Introduction to Image Processing	3	資工系
	人工智慧概論 Intro. to Artificial Intelligence	3	資工系
	資料庫系統概論 Introduction to Database Systems	3	資工系
	機器學習概論 Introduction to Machine Learning	3	資工系
	數位訊號處理概論 Intro. to Digital Signal Processing	3	資工系
	訊號與系統 Signals and Systems	3	資工系
	傳播科技與健康照護 The application of media and technology in healthcare	2	護理系
	看得到、找得到、用得到的長期照顧 Simple Way to Get the Service of Long Term Care	2	護理系
	教學原理與教學法 Principles & Methods of Teaching	2	護理系
	醫學影像原理與實務 Principles and Practices of Medical Imaging	2	醫學系
	機器學習概論與實作 Introduction to Machine Learning and Practice	3	醫學系
	生醫資料、訊號及影像的人工智慧	2	醫學系

		Artificial Intelligence for Biomedical Data, Signal, and Image		
		進階公共衛生議題 Topics in Advanced Public Health	1	醫學系
		人工智慧醫學影像應用 專題研究 Research Project in Application of Artificial Intelligence on Medical Imaging	3	醫學系/ 資工系
	進階 應用	數位醫學專題研究 Introduction to Machine Learning for Digital Healthcare	2	醫學系
		生醫科學與藥物發展的新知與前瞻 New frontiers in biomedical sciences and pharmaceutical development	2	醫學系
		計算機網路概論 Intro. to Computer Networks	3	資工系
		計算機圖學概論 Introduction to Computer Graphics	3	資工系
		資料探勘 Data Mining	3	資工系
		巨量資料分析技術與應用 Big Data Analytics Techniques and Applications	3	資工系
		資料視覺化與視覺分析 Data Visualization and Visual Analytics	3	資工系
		網路程式設計概論 Intro. to Network Programming	3	資工系
		網路安全 Network Security	3	資工系
		電腦視覺 Computer Vision	3	資工系
		圖形識別 Pattern Recognition	3	資工系
		精神衛生護理學 Psychiatric Mental Health Nursing	3	護理系

		護理專業問題研討 Seminar in Professional Issues	2	護理系	
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備註：

1. 資訊工程學系課程擋修制度及相關規定請參閱「國立陽明交通大學資訊工程學系學士班修業辦法」。

For the prerequisite of some important courses in CS, please check the undergraduate regulations.