國立陽明交通大學教育研究所「學習科學」跨域學程實施要點

National Yang Ming Chiao Tung University
The Institute of Education
Implementation Guidelines for Learning Sciences Cross-Disciplinary Program

一、依據國立陽明交通大學跨域學程實施辦法，國立陽明交通大學教育研究所(以下簡稱本所)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 Institute of Education (hereinafter referred to as Our Institute) 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 expanding second specialty.

二、跨域學程係指由學系、研究所，或學院提出跨域學程模組課程，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)。

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 (minimum 28 credits and no more than 32 credits).

三、本要點修業規定

Article Three   Policies of these Guidelines

外系學生欲選擇本所「學習科學」跨域學程作為其跨域專長者

For students from other departments who would like to take the Learning Sciences Cross-Disciplinary Program and choose Our Institute as their cross-disciplinary specialty.

1. 得於每學年度公告申請期限內向原系提出申請，通過原系以及本所的雙邊審查後，方可進入跨域學程。

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

2. 外系學生修讀跨域學程且選擇本所做為其跨域專長者，其課程包含：校共同必修、所屬學系必修/選修課程(含所屬學系的跨域學程模組課程)、以及列示於「學習科學跨域模組課程必修科目表」的模組課程，畢業學分以 128 學分或所屬學系為原則，並可於畢業證書上加註學習科學為其「跨域專長」。

2. The courses taken by students who would like to study for cross-disciplinary program and choose Our Institute as their cross-disciplinary specialty must include: required general education courses of the university, core and elective curriculum of the major department (including the cross-disciplinary program module curriculum of the major department), and the module curriculum listed on "The Required Course List for the students studying Learning Sciences cross-disciplinary module curriculum in the Institute of Education". Minimum graduation credits required are 128 or in accordance with the regulations and requirements of their major department. Learning Sciences will be remarked as their "Cross-Disciplinary Specialty" on the diploma.

四、本所所長或其指定之專任教師擔任跨域學程召集人，統籌執行學程各項事宜。並指定一名專任教師擔任跨域學程導師，專責輔導跨域學程的學生。

Article Four　　Our Director or a full-time teacher designated by the Director shall act as the convener of the cross-disciplinary program to coordinate the implementation of various matters of the program. The convener of the program must appoint one full-time teacher to be the mentor of the cross-disciplinary program 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，由兩位以上教師開授跨領域之創新整合式課程，得依本校教師授課時數核計原則規定辦理。

Article Five　　In order to encourage different departments or colleges working together for designing cross-disciplinary curriculum, teaching hours for the innovative cross-disciplinary curriculum offered by more than two teachers could be calculated according to National Yang Ming Chiao Tung University Principles for Verifying and Calculating Teachers' Teaching Hours.

六、修讀跨域學程學生，擬終止修讀跨域學程者，應至教務處申請撤銷其跨域學程資格，並回復至所屬學系修課規定。撤銷跨域學程資格之學生，日後甄選進入本中心修讀教育學程者，不得將已修習之師培中心所開跨域課程學分抵免為教育專業課程學分。曾經先修教育專業基礎課程且繳交教育學程學分費者不在此限。

Article Six   Students taking a cross-disciplinary program and intending to terminate the study in the cross-disciplinary program shall apply their withdrawal from the program to the Office of Academic Affairs and follow the regulations and requirements of their major department. Students withdrawing from the program are not allowed to transfer the credits they have taken to the Teacher Education Program they take afterwards. Exceptions are made for students who have previously taken a Foundation Course for the Education Profession and the course credit fee has been paid before students enroll in the Teacher Education Program.

七、修讀教育學程之師資生，不得將已採認之教育專業學分抵免為本跨域學程之學分。

Article Seven   Students taking the Teacher Education Program are not allowed to transfer the credits they have taken previously from the Learning Sciences Cross-Disciplinary Program to the Teacher Education Program.

八、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 Eight   Any other issues arising from matters not specified in these guidelines shall be handled in accordance with the University's constitution and regulations.

九、本要點經校級課程委員會通過後實施，修訂時亦同。

Article Nine   These guidelines were approved by the University's Curricular Committee before putting it into practice; the same shall be done upon any amendment thereto.

教育研究所「**學習科學**」跨域模組課程必修科目表

The Required Course List for the students studying Learning Sciences cross-disciplinary module curriculum in Institute of Education

類別 Category			科目名稱 Course Name	學分 Credit	開課系所 Department	備註 Remark
本所跨域模組（28 學分） Cross-disciplinary modules at Our Institute（28 credits）修畢於畢業證書加註「跨域專長：學習科學」"Cross-disciplinary Specialty: Learning Sciences" could be remarked on the diploma after the module curriculum is completed.	**基礎課程** **Basic Courses**	學習與教學 Learning and Instruction	教育心理學 Educational Psychology	2	師培中心 EDU	應選左列基礎課程至少 12 學分 The student should take and pass at least 12 credits from the basic courses listed here.
			學習與閱讀理解策略 Learning How to Learn: Strategies for Reading and Learning	2	師培中心 EDU	
			課程設計與發展 Curriculum Design and Development	2	師培中心 EDU	
			科學教育: 理性、思考、創新 Science Education: Rationality, Thinking, Creativity	2	師培中心 EDU	
			學習評量(教育測驗與評量) Educational Measurement and Evaluation	2	師培中心 EDU	
			初等應用統計 Introduction to Applied Statistics	2	教育碩 IED	
			教育研究法 Educational Research Methods	2	教育碩 IED	
			教學媒體與操作 Instructional Media and Operations	2	師培中心 EDU	
			數位學習導論 Foundation of E-learning	3	教育碩 IED	
			數位落差研究 Research in Digital Divide	2	教育碩 IED	
		認知神經科學與腦機介面 Cognitive Neuroscience and Brain Computer Interface	認知心理學 Cognitive Psychology	2	師培中心 EDU	
			生活、學習、腦科學 Life, Learning, and Brain Science	2	師培中心 EDU	
	進階課程 **Advanced Courses**	學習與教學 Learning and Instruction	發展心理學研究 Research in Developmental Psychology	3	教育碩 IED	應選左列進階課程至少 16 學分 The student should take and pass at least 16 credits from the
			科學學習心理學研究 Research in Psychology of Science Learning	2	教育碩 IED	
			科學教育研究 Research in Science Education	2	教育碩 IED	
			動機理論與數位學習	3	教育碩	

			課程名稱	學分		Advanced courses listed here.
			Human Motivation and E-learning		IED	
			建構主義在科學教育上的應用 The Practice of Constructivism in Science Education	2	教育碩 IED	
			科學史與科學本質 History and Nature of Science	2	教育碩 IED	
			STEM 教學與研究 The Instruction and Research of STEM	2	教育碩 IED	
		數位學習內容與環境 Digital Learning Content and Environments	網路素養與倫理專題 Special Topics in Internet Literacy and Ethics	3	教育碩 IED	
			數位學習教材研發與評鑑 The NYCU e-Learning Designers' Academy	2	教育碩 IED	
			數位學習專案管理與評鑑 E-learning Project Management and Evaluation	2	教育碩 IED	
			新興科技在教育上的應用 Application of Emerging Technologies in Education	3	教育碩 IED	
			資訊科技在科學學習的應用 Application of information technology in science learning	2	教育碩 IED	
			數位遊戲與學習 Digital Gaming and Learning	3	多媒體碩 ILE	
			APP 設計與教育應用 APP Development and Application in Education	3	教育碩 IED	
			行動學習設計 Design of Mobile Learning Environments	2	教育碩 IED	
			人工智慧在教育上的應用 The Application of Artificial Intelligence in Education	2	教育碩 IED	
			大數據在教育上的應用 Big Data and Education	2	教育碩 IED	
			機器學習在教育上的應用 Machine Learning in Education	2	教育碩 IED	
			腦機介面 Brain-Computer Interfaces	2	教育碩 IED	

至少需修習 28 學分
Minimum credits