Course Structure for Big Data and Digital Assessment Program National Taiwan Normal University

Passed on the 2012 Academic Year Fifth Department of Educational Psychology and Counseling's Affairs Committee on May 2, 2013 Passed on the Second Semester of 2012 Academic Year First Graduate Institute of Science Education's Affairs Committee on June 3, 2013 Passed on the Second Semester of 2012 Academic Year Second Graduate Institute of Information and Computer Education's Affairs Committee on June 20, 2013

Revision Passed on the 2013 Academic Year First Department of Educational Psychology and Counseling's Affairs Committee on October 17, 2013

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Revision Passed on the 2015 Academic Year Second meeting of the Academic Affairs Committee on May 18, 2016

Revision Passed on the 2018 Academic Year Second Curriculum Committee on April 17, 2019

Revision Passed on the 2021 Academic Year First Curriculum Committee on November 17, 2021

Revision Passed on the 2022 Academic Year Second Curriculum Committee on April 13, 2022

A-1. Required Course: 3.0 credits are required

Course Code	Course Name	Credit(s)	Department	Note
PGCB001	Research Design for Large-Scale Survey Studies	3	Big Data and Digital Assessment	At least 1 course is
PGCB007	Big Data Analytics	3	Program	required

A-2. Elective Course: 9.0 credits are required

Domain	Course Code	Course Name	Credit(s)	Department	Note
Investigative Method	PGCB006	Special Topics in Big Data	3		
	PGCB004	Data Analysis of Large-Scale Survey	3	Big Data and Digital Assessment	
	PGCB008	Big Data: Construction and Integration	3	Program	
Testing	SEC0037	Theories of Testing	3	Graduate Institute of Science Education	Recognized one course at most
	PCC8027	Modern Mental Test Theories	3	Department of Educational Psychology and Counseling	
	PCC8004	Test Theories and Assessment Technology	3	Department of Educational Psychology and Counseling	
	SEC0074	Evaluation of Science Learning	3	Graduate Institute of Science Education	
	SEC0075	Evaluation of Mathematics Learning	3	Graduate Institute of Science Education	
				Department of Mathematics	
	PCC0108	Studies in Computerized Testing	3	Department of Educational Psychology	Recognized one course at most
	PCC8005	Advanced Computerized Adaptive Testing	3	and Counseling	
	PCC0118	Studies in Test Construction	3	Department of	Recognized
	PCC8026	Application of Item Response Theories	3	Educational Psychology and Counseling	one course at most
	PCD0067	Scaling Method	3		
	PCC8002	Cognitively Diagnostic Assessment	3	Department of Educational Psychology	
	PCC8009	Criterion-Referenced Assessment	3	and Counseling	

Domain	Course Code	Course Name	Credit(s)	Department	Note	
Statistical Computing	SEM0017	Elementary Statistics	3	Graduate Institute of Science Education		
	E0C8001	Advanced Educational Statistics (A)	3	C II. C II. C I. C I.	Recognized one course at most	
	E0C8002	Advanced Educational Statistics (B)	3	College of Education		
	SEC0039	Data Analysis (I)	3	Graduate Institute of		
	SEC0040	Data Analysis (II)	3	Science Education		
	PCC8028	Experimental Design	3	Department of Educational Psychology and Counseling		
	E0C8004	Multivariate Analysis Statistics	3			
	E0C8005	Structural Equation Models	3	College of Education		
	E0C8006	Hierarchical Linear Models	3	Conege of Education		
	E0C8008	Categorical Analysis	3			
	PCC8008	Mathematics Foundation of Test	3	Department of Educational Psychology and Counseling		
	PCC8024	Special Topics on Media Multitasking	3	Department of		
	PCC0101	Special Topics in Psychology of E-learning	3	Educational Psychology and		
	PCC8010	Applying Digital Teaching and Assessment	3	Counseling	Recognized one course at most	
	ICC0076	Introduction to School ICT Integration	3			
	ICC0077	Implementation and Evaluation of School ICT Integration	3			
E-Learning	ICC0079	Introduction to e-Learning	3			
	ICC0080	Instructional Design for e- Learning	3	Graduate Institute of		
	ICC0041	Courseware Design and Evaluation	3	Information and Computer Education		
	ICC0081	e-Learning Management Systems	3			
	ICC0084	User Interface for e-Learning	3			
	ICC0085	e-Learning Evaluation	3			
	ICC0090	Digital game-based e-Learning	3			
	ICC0091	Mobile Learning	3			
	CHC8018	Studies in Digital Content and Applied Chinese Paleography	3	Department of Chinese		
Other Related Domains	ENC2053	Quantitative Methods and R Programming	3	Department of	Recognized one course at most	
	ENC2055	Introduction to Programming Languages for Linguistic Analysis	3	Department of English		
	ATC0079	Special Topics on Digital Arts	3	Department of Fine Arts		