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

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 Program	At least 1 course is required
PGCB007	Big Data Analytics	3		

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	Big Data and Digital Assessment Program	
	PGCB004	Data Analysis of Large-Scale Survey	3		
	PGCB008	Big Data: Construction and Integration	3		
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 and Counseling	Recognized one course at most
	PCC8005	Advanced Computerized Adaptive Testing	3		
	PCC0118	Studies in Test Construction	3	Department of Educational Psychology and Counseling	Recognized one course at most
	PCC8026	Application of Item Response Theories	3		
	PCD0067	Scaling Method	3	Department of Educational Psychology and Counseling	
	PCC8002	Cognitively Diagnostic Assessment	3		
	PCC8009	Criterion-Referenced Assessment	3		

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