

In-Service Master Program in Mathematics Education

Department of Mathematics and Information Education

Curriculum Structure & Course Title

112 Academic Year

科目名稱	Course title	Required/ Elective	Credits	Grade	Remark
Specialization Sources (Required 7 Credits, Elective 21 Credits, Total 28 Credits)					
一、Core Courses					
教育研究法	Methods of Research in Education	Required	2	1-1	
數學教育理論與實踐	Theories and Practices of Mathematics Education	Required	3	1-1	
專題討論 (一)	Master Seminar (I)	Required	1	2-1	
專題討論 (二)	Master Seminar (II)	Required	1	2-2	
二、Elective Courses					
教育統計	Statistics in Education	Elective	3	1-1	
教學設計與評鑑	Instructional Design and Evaluation	Elective	3	1-1	
數學史與數學哲學	History and Philosophy of Mathematics	Elective	3	1-1	
量的研究法	Quantitative Research	Elective	2	1-2	
質的研究法	Qualitative Research	Elective	2	1-2	
基礎數學	Essential Mathematics	Elective	3	1-2	
統計套裝軟體之應用	Applications of Statistical Package	Elective	3	1-2	
數學學習心理學	Psychology of Learning Mathematics	Elective	3	1-2	
數學教學專題研究	Studies on Mathematical Teaching	Elective	2	1-2	
數學師資培育專題研究	Studies on Mathematics Teacher Education	Elective	2	1-2	
數學史融入數學教學	Integration of History into Mathematics Teaching	Elective	3	1-2	
數學教育政策專題研究	Studies on the Policies of Mathematics Education	Elective	2	1-2	
數學跨領域統整課程設計	Interdisciplinary Curriculum Design for Mathematics	Elective	3	1-2	
臺灣數學課程發展歷史研究	Studies on the History of Taiwan's Mathematics Curriculum Development	Elective	3	1-2	
行動研究	Action Research	Elective	2	2-1	
機率論	Probability	Elective	3	2-1	
數學課程通論	Topics on Mathematics Curriculum	Elective	3	2-1	
數學教育專題研究	Studies on Mathematics Education	Elective	2	2-1	
數學教育與數學文化整合研究	Integrative Research for Mathematics Education and Culture	Elective	3	2-1	

科目名稱	Course title	Required/ Elective	Credits	Grade	Remark
國小數學教育文獻閱讀與批判	Critical Literature Reading for Elementary Mathematics	Elective	3	2-1	
數學思考與過程研究	Studies on Mathematics Thinking and Process	Elective	3	2-1	
數學素養教學與評量	Teaching and Assessment of Mathematical Literacy	Elective	3	2-1	
數學課程發展	Development of Mathematics Curriculum	Elective	2	2-1	
代數學	Theory of Algebra	Elective	3	2-2	
數學教材專題研究	Studies on Mathematics Teaching Materials	Elective	2	2-2	
數學課程評鑑	Evaluation of Mathematics Curriculum	Elective	2	2-2	
數學教學視導專題研究	Studies on the Supervision of Mathematics Education	Elective	2	2-2	
三、Interdisciplinary Studies					
數位學習研究	Digital Learning Research	Elective	3	1-1	
科技輔助與數學教學	Technology Assisted Instruction in Mathematics	Elective	3	1-1	
資訊教育教學法	Information Education Pedagogy	Elective	2	1-1	
資訊科技融入教學研究	Information Technology Integration into Instruction and Research	Elective	3	1-2	
行動與無所不在學習研究	Studies on Mobile Learning and Ubiquitous Learning	Elective	2	1-2	
遊戲式學習	Game-based Learning	Elective	2	1-2	
智慧學習研究	Studies on Smart Learning	Elective	3	1-2	
科技輔助自主學習	Technology Assisted in Self-regulated Learning	Elective	3	1-2	
數據分析實務與教育應用	Data Analysis in Educational Practice	Elective	3	1-2	
教育科技理論與實務	Educational Technology Practice and Theory	Elective	2	2-1	
資料探勘	Data Mining	Elective	2	2-1	
科技輔助適性學習與診斷	Technology Assisted in Adaptive Learning and Diagnosis	Elective	3	2-1	
資訊教育政策專題	Studies on Information Educational Policy	Elective	3	2-1	
智慧型教學系統	Intelligent Tutor System	Elective	2	2-2	
網路合作學習與教學	Internet Cooperative Learning and Teaching	Elective	2	2-2	
四、Others					
Intra-departmental, inter-departmental, and inter-university courses.		Elective	2	Inter-departmental and inter-university elective courses follow the university's relevant regulations.	