

Department of Mathematics and Information Education

**Micro-credit Course for Literacy-oriented Mathematics Teaching and Assessment**

Curriculum Structure & Course Title

114 Academic Year

| Course type                                 | Course title                                                       | 科目名稱         | Required/<br>Elective | Credits | Grade | Remark                                                            |
|---------------------------------------------|--------------------------------------------------------------------|--------------|-----------------------|---------|-------|-------------------------------------------------------------------|
| Mathematic Education - Core Competencies    | Introduction to Mathematics Education                              | 數學教育概論       | Elective              | 2       | 1-2   | Each student has to take at least 5 credits in this course domain |
|                                             | Conceptual Development in Mathematics                              | 數學概念發展       | Elective              | 3       | 2-1   |                                                                   |
|                                             | Study of Problem Solving in Mathematics                            | 數學解題研究       | Elective              | 2       | 2-2   |                                                                   |
|                                             | Teaching and Assessment in Mathematics                             | 數學教學與評量      | Elective              | 2       | 3-1   |                                                                   |
|                                             | Studies on Mathematics Curriculum                                  | 數學課程研究       | Elective              | 3       | 3-2   |                                                                   |
| Mathematics Literacy - Exploratory Teaching | Introduction of Mathematics                                        | 數學導論         | Elective              | 3       | 1-1   | Each student has to take at least 5 credits in this course domain |
|                                             | Exploration and Teaching of Mathematics Literacy                   | 數學素養探索與教學    | Elective              | 2       | 2-1   |                                                                   |
|                                             | Mathematics Education for Early Childhood                          | 幼兒之數學教育      | Elective              | 2       | 2-2   |                                                                   |
|                                             | Mathematics Games                                                  | 數學遊戲         | Elective              | 2       | 2-2   |                                                                   |
|                                             | Modeling in School Mathematics                                     | 中小學數學建模      | Elective              | 2       | 3-1   |                                                                   |
|                                             | Exploration and Design of Interdisciplinary Mathematics Curriculum | 跨領域數學課程探索與設計 | Elective              | 2       | 3-2   |                                                                   |
|                                             | Aesthetic Education of Mathematics and Mathematical Discovery      | 數學美育教育與數學發現  | Elective              | 2       | 3-2   |                                                                   |
|                                             | History of Mathematics                                             | 數學史          | Elective              | 3       | 4-1   |                                                                   |
|                                             | Mathematical Thinking in Fictions and Films                        | 小說與電影中的數學思維  | Elective              | 3       | 4-1   |                                                                   |
|                                             | Reading and Writing Skills in General Mathematics                  | 數學科普閱讀與寫作    | Elective              | 2       | 4-1   |                                                                   |

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|  | Exploration and Design<br>of Mathematics<br>Grounding Activities | 數學奠基活<br>動探索與設<br>計 | Elective | 2 | 4-1 |  |
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