



課 綱 Course Outline  
教育與潛能開發學系科學教育碩士班

|  |   |                  |                 |   |     |
|--|---|------------------|-----------------|---|-----|
| 中文課程名稱<br>Course Name in Chinese               | 自然科課程統整的實施與評量   |                  |                 |   |     |
| 英文課程名稱<br>Course Name in English               | Science-Based Integrated Curriculum   |                  |                 |   |     |
| 科目代碼<br>Course Code                            | SCE_52910   | 班 別<br>Degree    | 碩士班<br>Master's |   |     |
| 修別<br>Type                                     | 選修<br>Elective  | 學分數<br>Credit(s) | 3.0             | 時 數<br>Hour(s)  | 3.0 |
| 先修課程<br>Prerequisite                           |   |                  |                 |   |     |
| 課程目標<br>Course Objectives                      |   |                  |                 |   |     |
| 此課程主要目標在認識自然領域課程統整的內涵與形式，進而落實在自然領域課程統整的教學與評量中。 |   |                  |                 |   |     |
| 系教育目標<br>Dept.'s Education Objectives          |   |                  |                 |   |     |
| 1  | 培養從事科學教育學術研究人才。<br>To cultivate academic researchers of science education             |                  |                 |   |     |
| 2  | 促進科學教育專業中小學科學師資。<br>To promote the science teachers' professional development         |                  |                 |   |     |
| 3  | 培養大眾科學教育及科學傳播的人才<br>To develop talent of public science and science communication     |                  |                 |   |     |
| 系專業能力<br>Basic Learning Outcomes               |   |                  |                 | 課程目標與系專業能力相關性<br>Correlation between Course Objectives and Dept.'s Education Objectives |     |
| A  | 瞭解科學教育專業理論及內涵。<br>To comprehend the theories and implementations of science education |                  |                 |   | ●   |
| B  | 具備科學教學專業素養。<br>To possess the professional competencies of science teaching           |                  |                 |   |     |
| C  | 具有科學教育研究基礎素養。<br>To have the basic abilities of science education research            |                  |                 |   | ○   |
| D  | 具備科學素養與人文關懷。<br>To integrate scientific literacy with humanistic concern              |                  |                 |   |     |

|   |   |   |
|---|---|---|
| E   | 具備科學教育推廣與傳播素養。<br>To possess the abilities of science popularization and communicate                      | ● |
| F   | 具備主動探究之態度與熱愛自然的情操。<br>To express the positive attitude toward inquiry and the sentiment adoring the natur |   |
| G   | 具備多面相的科學觀。<br>To understand the science with multidimensional viewpoints                                  |   |
| 圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated  |   |   |
| 課程大綱<br>Course Outline  |   |   |
| 1. 認識自然領域課程綱要與課程  |   |   |
| 2. 探討自然領域課程統整的內涵  |   |   |
| 3. 了解自然領域課程統整的形式  |   |   |
| 4. 落實自然領域課程統整的實施與評量   |   |   |
| 資源需求評估（師資專長之聘任、儀器設備的配合．．．等）<br>Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.) |   |   |
| 具備科學教育專長  |   |   |
| 課程要求和教學方式之建議<br>Course Requirements and Suggested Teaching Methods  |   |   |
| 講述、師生討論、設計並實施課程統整教學與評量  |   |   |
| 其他<br>Miscellaneous   |   |   |
| 本課程為國民小學教師自然領域加註專長課程之一。   |   |   |