



課 綱 Course Outline  
資訊工程學系國際組

|                                                                                                          |                                                                                               |                  |                    |                                                                                          |     |
|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------|--------------------|------------------------------------------------------------------------------------------|-----|
| 中文課程名稱<br>Course Name in Chinese                                                                         | 離散數學                                                                                          |                  |                    |                                                                                          |     |
| 英文課程名稱<br>Course Name in English                                                                         | Discrete Mathematics                                                                          |                  |                    |                                                                                          |     |
| 科目代碼<br>Course Code                                                                                      | CSIEB0080                                                                                     | 班 別<br>Degree    | 學士班<br>Bachelor' s |                                                                                          |     |
| 修別<br>Type                                                                                               | 學程<br>Program                                                                                 | 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                                                                                |                                                                                               |                  |                    |                                                                                          |     |
| 本課程主要目標以為離散數學課程或是相關課程之基礎。<br>Provide a foundation for study of discrete mathematics and related courses. |                                                                                               |                  |                    |                                                                                          |     |
| 系教育目標<br>Dept.' s Education Objectives                                                                   |                                                                                               |                  |                    |                                                                                          |     |
| 1                                                                                                        | 具備學科知識，養成專業技能<br>Acquire academic knowledge, develop professional skills                      |                  |                    |                                                                                          |     |
| 2                                                                                                        | 學習創新思考，分析解決問題<br>Inspire innovative thinking, increase analytical problem solving ability     |                  |                    |                                                                                          |     |
| 3                                                                                                        | 培養團隊精神，學習溝通合作<br>Promote teamwork spirit, encourage coordination and cooperation              |                  |                    |                                                                                          |     |
| 4                                                                                                        | 提昇專業倫理，承擔社會責任<br>Sublimate professional ethics, engage social responsibility                  |                  |                    |                                                                                          |     |
| 5                                                                                                        | 涵育人文素養，開拓國際視野<br>Cultivate humanities, broaden global perspectives                            |                  |                    |                                                                                          |     |
| 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                                                                                                        | 資訊專業終身學習能力<br>Ability of lifetime learning in information profession                          |                  |                    | ●                                                                                        |     |
| B                                                                                                        | 實驗驗證資訊科學能力<br>Ability of validate experimental result validation in information science field |                  |                    | ●                                                                                        |     |
| C                                                                                                        | 資訊工具整合運用能力<br>Ability of integrated applications of information technology                    |                  |                    | ●                                                                                        |     |

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|---|-----------------------------------------------------------------------------------------------------|---|
| D | 資訊系統應用設計開發能力<br>Ability of information application system design and development                    | ○ |
| E | 團隊合作溝通協調能力<br>Ability of teamwork, communication, and coordination                                  | ○ |
| F | 資通訊科技問題解決能力<br>Ability of problem solving regarding information and communication technology        |   |
| G | 瞭解資訊科技多元影響能力<br>Ability to understand information technology' s multiple influences                 | ○ |
| H | 肩負資訊人社會責任能力<br>Ability of bearing the social responsibilities being among information professionals |   |

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱  
Course Outline

-- Function theory  
-- Set theory  
-- Graph Theory  
-- Mathematical induction  
-- Relationship and recursive relationship  
-- Permutation combination and probability

資源需求評估（師資專長之聘任、儀器設備的配合．．．等）  
Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

課程要求和教學方式之建議  
Course Requirements and Suggested Teaching Methods

Lectures and discussions.

其他  
Miscellaneous