



## 課 綱 Course Outline

### 經濟學系碩士班大數據分析與產業經濟組

|                                       |   |                  |                 |   |     |
|---------------------------------------|---|------------------|-----------------|---|-----|
| 中文課程名稱<br>Course Name in Chinese      | 計量經濟理論  |                  |                 |   |     |
| 英文課程名稱<br>Course Name in English      | Econometric Theory  |                  |                 |   |     |
| 科目代碼<br>Course Code                   | EC_50450  | 班 別<br>Degree    | 碩士班<br>Master's |   |     |
| 修別<br>Type                            | 必修<br>Required  | 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             |   |                  |                 |   |     |
| 為本所必修課程之一，培養學生具備進行實證研究所需的統計方法與能力。     |   |                  |                 |   |     |
| 系教育目標<br>Dept.'s Education Objectives |   |                  |                 |   |     |
| 1                                     | 培育具學術深造潛力及實務發展能力的優秀經濟人才。<br>Educate postgraduate students with professional knowledge and empirical skills for further academic research.   |                  |                 |   |     |
| 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                                     | 數理分析能力：通曉經濟學的進階理論技巧，應用數學與賽局解決經濟議題的能力。<br>Mathematical analysis skills: Mastering in intermediate application of mathematical theories and game theory in analyzing economic issues. |                  |                 | ●   |     |
| B                                     | 實證經濟分析能力：通曉經濟學的進階實證技巧，善用資訊科技進行資訊蒐集、資料統計與計量分析。<br>Empirical analysis skills: Mastering in intermediate application of statistics and econometrics in data collection and examination |                  |                 | ●   |     |
| C                                     | 微觀經濟之闡釋能力：通曉進階個體經濟學相關的理論與應用。<br>Microeconomic perspective: Thorough understanding of intermediate microeconomic theories and relevant application                                   |                  |                 | ○   |     |
| D                                     | 宏觀經濟之闡釋能力：通曉進階總體經濟學相關的理論與應用。<br>Macroeconomic perspective: Thorough understanding of intermediate macroeconomic theories and relevant application                                   |                  |                 | ○   |     |

|   |  |  |
|---|--|--|
| E   | 自我調整適應社會之能力：具備適應現代社會的學養以及就業能力。<br>Employment opportunities: capabilities of working on important policy and decision challenges in business and government |  |
| F   | 溝通表達能力：思路清晰，有能力與人溝通並撰寫進階專業研究報告。<br>Communication skills: Having a clear mind and capability in writing an intermediate professional academic report        |  |
| 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. 矩陣代數<br>2. 機率及分配<br>3. 統計檢定<br>4. 單變量及多變量線性迴歸<br>5. 殘差分析及變異數檢驗<br>6. 二元應變數模型<br>7. 時間序列模型                          |  |  |
| 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.) |  |  |
| 筆記型電腦<br>投影機<br>統計軟體  |  |  |
| 課程要求和教學方式之建議<br>Course Requirements and Suggested Teaching Methods  |  |  |
| 本課程以講授方式進行，輔以課堂實作練習   |  |  |
| 其他<br>Miscellaneous   |  |  |
|   |  |  |