



課 綱 Course Outline  
光電工程學系學士班

|                                        |                                                                                                                   |                                                    |               |                                                                                          |      |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------|------------------------------------------------------------------------------------------|------|
| 中文課程名稱<br>Course Name in Chinese       |                                                                                                                   | 進階數位設計實驗                                           |               |                                                                                          |      |
| 英文課程名稱<br>Course Name in English       |                                                                                                                   | Advanced Digital Design laboratory and experiments |               |                                                                                          |      |
| 科目代碼<br>Course Code                    |                                                                                                                   | OE__10450                                          | 班 別<br>Degree | 學士班<br>Bachelor' s                                                                       |      |
| 修別<br>Type                             | 學程<br>Program                                                                                                     | 學分數<br>Credit(s)                                   | 1. 0          | 時 數<br>Hour(s)                                                                           | 3. 0 |
| 先修課程<br>Prerequisite                   |                                                                                                                   |                                                    |               |                                                                                          |      |
| 課程目標<br>Course Objectives              |                                                                                                                   |                                                    |               |                                                                                          |      |
| 培養進階數位工程能力：程式邏輯、電腦輔助設計                 |                                                                                                                   |                                                    |               |                                                                                          |      |
| 系教育目標<br>Dept.' s Education Objectives |                                                                                                                   |                                                    |               |                                                                                          |      |
| 1                                      | 傳授科學知識，培訓實用技能<br>Acquire science knowledge, develop practical skills                                              |                                                    |               |                                                                                          |      |
| 2                                      | 培養工程倫理，啟發創新思維<br>Sublimate engineering ethics, encourage creative thinking                                        |                                                    |               |                                                                                          |      |
| 3                                      | 培養團隊精神，促進協調合作<br>Promote teamwork spirit, inspire coordination and cooperation                                    |                                                    |               |                                                                                          |      |
| 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                                      | 具有光電相關的物理、化學、材料及數學的知識。<br>Physics, chemistry, material, and math knowledge related to opto-electronic engineering |                                                    |               | ●                                                                                        |      |
| B                                      | 具有光電工程的專業知識及應用能力。<br>Professional knowledge and application ability of opto-electronic engineering                |                                                    |               | ●                                                                                        |      |
| C                                      | 具有設計與執行實驗、報告撰寫與數據解釋之能力。<br>Abilities to design and execute experiment, write reports, and explain data            |                                                    |               | ●                                                                                        |      |
| D                                      | 使用儀器進行物件的分析及測試。<br>Analysis and test of devices by instruments                                                    |                                                    |               | ●                                                                                        |      |

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| E                                                                                                                     | 具備適當的英文能力，應用於學習與交流。<br>English language ability to study and interac | ○ |
| F                                                                                                                     | 具有良好的溝通與團隊合作的能力。<br>Ability to communicate and teamwork              | ○ |
| G                                                                                                                     | 具有創新思維及終身學習的能力。<br>Creative thinking and life-long learning ability  | ● |
| 圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated                                                |                                                                      |   |
| 課程大綱<br>Course Outline                                                                                                |                                                                      |   |
| ●物聯網智慧應用與技術<br>感測與控制<br>機電整合<br>電腦輔助設計<br>●資料擷取與分析<br>資料處理<br>網頁擷取與轉換<br>資料分析<br>資料視覺化                                |                                                                      |   |
| 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.) |                                                                      |   |
| 電腦教室                                                                                                                  |                                                                      |   |
| 課程要求和教學方式之建議<br>Course Requirements and Suggested Teaching Methods                                                    |                                                                      |   |
|                                                                                                                       |                                                                      |   |
| 其他<br>Miscellaneous                                                                                                   |                                                                      |   |
|                                                                                                                       |                                                                      |   |