



課 綱 Course Outline
光電工程學系碩士班

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| 中文課程名稱 Course Name in Chinese | 光電子學 | | | | |
| 英文課程名稱 Course Name in English | Optoelectronics and Photonics | | | | |
| 科目代碼 Course Code | OE_52700 | 班 別 Degree | 碩士班 Master' s | | |
| 修別 Type | 選修 Elective | 學分數 Credit(s) | 3.0 | 時 數 Hour(s) | 3.0 |
| 先修課程 Prerequisite | 普通物理 | | | | |
| 課程目標 Course Objectives | | | | | |
| 增進學生對於光電元件的背景以及其原理與應用等知識 | | | | | |
| 系教育目標 Dept.' s Education Objectives | | | | | |
| 1 | 傳授科學知識，培訓實用技能。 Acquire science knowledge, develop practical skill | | | | |
| 2 | 培養工程倫理，啟發創新思維。 Sublimate engineering ethics, encourage creative thinking | | | | |
| 3 | 培養團隊精神，啟發獨創能力。 Develop the spirit of teamwork, and inspire the creative ability. | | | | |
| 4 | 提昇專業素養，拓展國際視野。 Develop professional ability, broaden global perspectives | | | | |
| 系專業能力 Basic Learning Outcomes | | | | 課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.' s Education Objectives | |
| A | 具有獨立研究能力 Equipped with abilities of independent research. | | | ○ | |
| B | 具有光電工程的專業知識及應用能力。 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。 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。 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。 English language ability to study and interact | ● |
| F | 具有良好的溝通與團隊合作的能力。 Ability to communicate and teamwork | ○ |
| G | 具有創新思維及終身學習的能力。 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
Course Outline

Topic 1 Wave Nature of Light
Topic 2 Dielectric Waveguides and Optical Fibers
Topic 3 Semiconductor Science and Light Emitting Diode
Topic 4 Stimulated Emission Devices - Lasers

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.)

無特殊要

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

以指定教材按預訂進度進行教學。
教學以講授及討論為主，以相關文獻資料加以補充。

其他
Miscellaneous