



課 綱 Course Outline
材料科學與工程學系一般組

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| 中文課程名稱 Course Name in Chinese | 半導體元件 | | | | |
| 英文課程名稱 Course Name in English | Semiconductor Devices | | | | |
| 科目代碼 Course Code | MS_51900 | 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 | | | | | |
| 課程目標 Course Objectives | | | | | |
| 讓學生在修習此一課程後，能對固態電子元件有深入的了解，以利研究工作的進行。 | | | | | |
| 系教育目標 Dept.' s Education Objectives | | | | | |
| 1 | 建立專業知識基礎 Set the professional knowledge foundation | | | | |
| 2 | 培養專業實驗技能 Train the professional experimental skill | | | | |
| 3 | 養成獨立研究能力 Insure capability of independent research | | | | |
| 4 | 養成優質社會人格 Form the positive social character | | | | |
| 5 | 開展國際視野 Develop global vision | | | | |
| 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 | 具備材料科學所需的進階物理、化學及數學的知識。 Acquire required advanced physical, chemical, and mathematic knowledge for materials science and engineering. | | | ○ | |
| B | 具備材料科學的進階專業知識，並能應用於解決工程上之問題。 Acquire required advanced professional knowledge for materials science and engineering, applicable in solving engineering problems | | | ● | |

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| C | 具備獨立研究之能力。 Equipped with capabilities of independent research. | ○ |
| D | 具備專業道德及責任感，與良好的溝通及團隊合作的能力。 Acquire professional morality and responsibility, and capability of quality communication and team cooperation. | |
| E | 具備適當的英文能力，應用於學習與交流。 Acquire English capability used for learning and interaction. | ○ |
| 圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated | | |
| 課程大綱 Course Outline | | |
| 本課程介紹各種固態電子元件，內容涵蓋：半導體基本特性、金屬與半導體界面、元件理論與製程簡介。 | | |
| 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.) | | |
| 以具有所開課程專長之教師擔任授課；資料整理所需之電腦、影印機；討論所需之投影機、幻燈機等教學設備 | | |
| 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，必要時以相關文獻資料加以補充。 | | |
| 其他 Miscellaneous | | |
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