

# 學士後電子與光子學士學位學程

## Electronics and Photonics Post-undergraduate Second Degree Program

113 學年度-電子與 AI 應用組 School Year 113-Electronics and AI Application Group

| 選別<br>Type   | 科目名稱<br>Course Name                              | 學分<br>Credit | 第一學年<br>Grade 1          |  | 第二學年<br>Grade 2 |     | 備註<br>Note   |
|--|--|--------------|--------------------------|--|-----------------|-----|--|
|  |  |              | 1st                      | 2nd                                      | 1st             | 2nd |  |
|  |  |              | 必修<br>Required<br>Course | 應用數學(一)(二)<br>Applied Mathematics (1)(2) | 6               | 3   |  |
| 應用物理(一)(二)<br>Applied Physics (1)(2)   | 6  | 3            |                          | 3  |                 |     |  |
| 應用電子學(一)(二)<br>Applied Electronics (1)(2)                                    | 6  | 3            |                          | 3  |                 |     |  |
| 電腦程式與計算分析(一)(二)<br>Computer Programming and<br>Computational Analysis (1)(2) | 6  | 3            |                          | 3  |                 |     |  |
| 應用電子學實驗(一)(二)<br>Applied Electronic Laboratory (1)(2)                        | 2  | 1            |                          | 1  |                 |     |  |
| 半導體物理與元件<br>Semiconductor Physics and Device                                 | 3  |              |                          |  | 3               |     | 修習「半導體物理及元<br>件(一)」學分可申請免修<br>註 1                  |
| 近代物理<br>Modern physics   | 3  |              |                          |  | 3               |     |  |
| 半導體製程<br>Semiconductor Processing  | 3  |              |                          |  | 3               |     |  |
| 資料分析與機器學習<br>Data analysis and machine learning                              | 3  |              |                          |  | 3               |     |  |
| 專題討論(一)(二)<br>Seminar(1)(2)  | 2  |              |                          |  | 1               | 1   |  |
| 資料庫管理<br>Database Management   | 3  |              |                          |  | 3               |     |  |
| 選修<br>Elective<br>Course   | 光子學實驗<br>Photonics Lab.                          | 2            |                          |  | 2               |     | 修習「光學實驗」學分可<br>申請免修註 1                             |
|  | 電磁學<br>Electromagnetics                          | 3            |                          |  | 3               |     |  |
|  | 巨量資料導論<br>Introduction to big data analysis      | 3            |                          |  | 3               |     |  |
|  | 量子力學導論<br>Introduction to Quantum Mechanics      | 3            |                          |  |                 | 3   | 修習「量子力學」、「量<br>子力學(一)」或「量子力<br>學(二)」學分可申請免修<br>註 1 |
|  | 數位光學實作<br>Hands-on Experiments on Digital Optics | 3            |                          |  |                 | 3   |  |
|  | 光電子學<br>Optoelectronics                          | 3            |                          |  |                 | 3   |  |
|  | 資料結構與演算法<br>Data Structures and Algorithms       | 3            |                          |  |                 | 3   |  |
| 資料探勘與深度學習<br>Data Mining and Deep Learning                                   | 3  |              |                          |  | 3               |     |  |

|   |   |  |   |  |   |                  |
|---|---|--|---|--|---|------------------|
| 電子系統專題<br>Special Topics in Electronic Systems  | 3 |  |   |  | 3 |                  |
| 電子電路系統設計<br>Electronic circuit system design  | 3 |  |   |  | 3 |                  |
| 專題實作<br>Special topic implementation  | 1 |  |   |  | 1 |                  |
| 物理光學<br>Physical Optics   | 3 |  |   |  | 3 | 修習「光學」學分可申請免修註 1 |
| 邏輯設計與 FPGA<br>Logic Design and Field Programmable Gate Array  | 3 |  | 3 |  |   |                  |
| 本學程最低畢業學分為 48 學分 (必修 43 學分及選修 5 學分)<br>Minimum Total Credits for Graduation : 48 (Required 43 Credit and Elective 5 Credit) |   |  |   |  |   |                  |

註 1：欲申請免修，需填寫「免修學分申請表」

## 學士後電子與光子學士學位學程

### Electronics and Photonics Post-undergraduate Second Degree Program

113 學年度-光子與 AI 應用組 School Year 113-Photonics and AI Application Group

| 選別<br>Type               | 科目名稱<br>Course Name   | 學分<br>Credit                                    | 第一學年<br>Grade 1 |     | 第二學年<br>Grade 2 |     | 備註<br>Note         |
|--------------------------|---|---|-----------------|-----|-----------------|-----|--------------------|
|                          |   |   | 1st             | 2nd | 1st             | 2nd |                    |
| 必修<br>Required<br>Course | 應用數學(一)(二)<br>Applied Mathematics (1)(2)                                  | 6   | 3               | 3   |                 |     |                    |
|                          | 應用物理(一)(二)<br>Applied Physics (1)(2)                                      | 6   | 3               | 3   |                 |     |                    |
|                          | 應用電子學(一)(二)<br>Applied Electronics (1)(2)                                 | 6   | 3               | 3   |                 |     |                    |
|                          | 電腦程式與計算分析(一)(二)<br>Computer Programming and Computational Analysis (1)(2) | 6   | 3               | 3   |                 |     |                    |
|                          | 應用電子學實驗(一)<br>Applied Electronic Laboratory (1)                           | 1   | 1               |     |                 |     |                    |
|                          | 近代物理<br>Modern physics  | 3   |                 |     | 3               |     |                    |
|                          | 電磁學<br>Electromagnetics   | 3   |                 |     | 3               |     |                    |
|                          | 光子學實驗<br>Photonics Lab.   | 2   |                 |     | 2               |     | 修習「光學實驗」學分可申請免修註 1 |
|                          | 資料分析與機器學習<br>Data analysis and machine learning                           | 3   |                 |     | 3               |     |                    |
|                          | 專題討論(一)(二)<br>Seminar(1)(2)   | 2   |                 |     | 1               | 1   |                    |
|                          | 光電子學<br>Optoelectronics   | 3   |                 |     |                 | 3   |                    |
|                          | 資料庫管理<br>Database Management  | 3   |                 |     |                 | 3   |                    |
|                          |   | 應用電子學實驗(二)<br>Applied Electronic Laboratory (2) | 1               |     | 1               |     |                    |

|                          |  |   |  |   |   |                                       |
|--------------------------|--|---|--|---|---|---------------------------------------|
| 選修<br>Elective<br>Course | 半導體物理與元件<br>Semiconductor Physics and Device   | 3 |  |   | 3 | 修習「半導體物理及元件(一)」學分可申請免修註1              |
|                          | 半導體製程<br>Semiconductor Processing  | 3 |  |   | 3 |                                       |
|                          | 巨量資料導論<br>Introduction to big data analysis  | 3 |  |   | 3 |                                       |
|                          | 量子力學導論<br>Introduction to Quantum Mechanics  | 3 |  |   | 3 | 修習「量子力學」、「量子力學(一)」或「量子力學(二)」學分可申請免修註1 |
|                          | 數位光學實作<br>Hands-on Experiments on Digital Optics   | 3 |  |   | 3 |                                       |
|                          | 資料結構與演算法<br>Data Structures and Algorithms   | 3 |  |   | 3 |                                       |
|                          | 資料探勘與深度學習<br>Data Mining and Deep Learning   | 3 |  |   | 3 |                                       |
|                          | 電子系統專題<br>Special Topics in Electronic Systems   | 3 |  |   | 3 |                                       |
|                          | 電子電路系統設計<br>Electronic circuit system design   | 3 |  |   | 3 |                                       |
|                          | 專題實作<br>Special topic implementation   | 1 |  |   | 1 |                                       |
|                          | 物理光學<br>Physical Optics  | 3 |  |   | 3 | 修習「光學」學分可申請免修註1                       |
|                          | 邏輯設計與 FPGA<br>Logic Design and Field Programmable Gate Array   | 3 |  | 3 |   |                                       |
|                          | <p>本學程最低畢業學分為 48 學分 (必修 44 學分及選修 4 學分)<br/> Minimum Total credits for Graduation : 48 (Required 44 Credit and Elective 4 Credit)</p> |   |  |   |   |                                       |

註1：欲申請免修，需填寫「免修學分申請表」