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|---|--|---|---|---|---|---|--|--|--|
| 系 選 修 | 固 態 電 子 組 (至 少 0 學 分) | 光學 | 3 | 3 | | | | | |
| | | optics | | | | | | | |
| | | 光電半導體元件 | 3 | 3 | | | | | |
| | | Optoelectronic Semiconductor Devices | | | | | | | |
| | | 光電子學 | 3 | 3 | | | | | |
| | | Optoelectronics | | | | | | | |
| | | 光電實驗技術 | 2 | 4 | | | | | |
| | | Optoelectronic Laboratory | | | | | | | |
| | | 光電工程概論 | | | 3 | 3 | | | |
| | | Introduction to Electro-Optical Engineering | | | | | | | |
| | | 光電與半導體量測技術 | | | 3 | 3 | | | |
| | | Optoelectronic and Semiconductor Measurement Technology | | | | | | | |
| | | 光電量測原理與系統設計 | | | 3 | 3 | | | |
| | | Optoelectronic measurement principles and system design | | | | | | | |
| | | 光電量測系統設計專題 | | | 1 | 1 | | | |
| | | Project of optical measurement system design | | | | | | | |
| | | 半導體元件及材料特性分析 | | | 3 | 3 | | | |
| | | Analysis of Semiconductor Devices and Materials | | | | | | | |
| | | 半導體元件物理 | | | 3 | 3 | | | |
| | | Physics of Semiconductor Devices | | | | | | | |
| | | 半導體產業技術專論 | | | 3 | 3 | | | |
| | | Special Topics of Semiconductor Industry and Technology | | | | | | | |
| | | 半導體磊晶技術 | 3 | 3 | | | | | |
| | | Semiconductor Epitaxy Technologies | | | | | | | |
| | | 半導體製程技術 | 3 | 3 | | | | | |
| | | Semiconductor processing technology | | | | | | | |
| | | 半導體雷射 | | | 3 | 3 | | | |
| | | Semiconductor Lasers | | | | | | | |
| | | 固態物理 | 3 | 3 | | | | | |
| | | Solid State Physics | | | | | | | |
| 奈米半導體微影技術 | 3 | 3 | | | | | | | |
| Nano Semiconductor Lithography Technology | | | | | | | | | |
| 微電子材料與製程 | 3 | 3 | | | | | | | |
| Microelectronic Materials and Processing | | | | | | | | | |
| 科技英文寫作 | | | 3 | 3 | | | | | |
| Technical English Writing | | | | | | | | | |
| 近代VLSI與高速電晶體 | | | 3 | 3 | | | | | |
| Modern VLSI and High-Speed Transistors | | | | | | | | | |
| 量子力學 | | | 3 | 3 | | | | | |
| Quantum Mechanics | | | | | | | | | |
| 非揮發性記憶體 | 3 | 3 | | | | | | | |
| Non-volatile Memory | | | | | | | | | |

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| 系 選 修 | SO C 組 (至 少 0 學 分) | SOPC設計架構 | 3 | 3 | | | 神經網路加速技術 | 3 | 3 |
| | | System-on-a-Programmable-Chip Design and Architecture | | | | | Neural-Network Acceleration | | |
| | | 中央處理單元設計 | 3 | 3 | | | | | |
| | | Design of Central Processing Unit | | | | | | | |
| | | 介面設計 | 3 | 3 | | | | | |
| | | Peripheral Interface Design | | | | | | | |
| | | 低功率積體電路設計 | 3 | 3 | | | | | |
| | | Low Power Integrated-Circuit Design | | | | | | | |
| | | 共享式記憶體多核心系統 | 3 | 3 | | | | | |
| | | Shared-memory Multi-Core System | | | | | | | |
| | | 創意機器人實作 | 2 | 2 | | | | | |
| | | Practice of Creative Robots | | | | | | | |
| | | 影像辨識技術 | 2 | 2 | | | | | |
| | | Image Recognition Technology | | | | | | | |
| | | 微感測器及感測電路設計 | | | 3 | 3 | | | |
| | | Micro-sensors and sensor circuit design | | | | | | | |
| | | 數位積體電路設計 | 3 | 3 | | | | | |
| | | Digital Integrated Circuits Design | | | | | | | |
| | | 晶片系統設計專題 | 3 | 3 | | | | | |
| | | SOC Project | | | | | | | |
| | | 深度學習 | 3 | 3 | | | | | |
| | | Deep Learning | | | | | | | |
| | | 混合訊號積體電路設計 | 3 | 3 | | | | | |
| | | Mixed-Signal Integrated Circuit Design | | | | | | | |
| | | 積體電路測試方法 | 3 | 3 | | | | | |
| | | IC Test Methodologies | | | | | | | |
| | | 系統晶片測試 | 3 | 3 | | | | | |
| | | System-on-a-Chip Testing | | | | | | | |
| | | 系統晶片設計 | 3 | 3 | | | | | |
| | | SoC Design | | | | | | | |
| | | 系統晶片設計技術 | 3 | 3 | | | | | |
| | | Practices on SoC Design | | | | | | | |
| | | 超大型積體電路佈局設計 | 3 | 3 | | | | | |
| | | VLSI Circuit Layout Design | | | | | | | |
| | | 超大型積體電路設計 | 3 | 3 | | | | | |
| | | VLSI Design | | | | | | | |
| 超大型積體電路除錯驗證技術 | | | 2 | 2 | | | | | |
| VLSI Debugging and Verification Technology | | | | | | | | | |
| 車用機電子學 | | | 3 | 3 | | | | | |
| Automotive Mechatronics | | | | | | | | | |
| 車用電子系統導論 | 3 | 3 | | | | | | | |
| Introduction to Automobile Electronics | | | | | | | | | |
| 軟硬體協同設計 | 3 | 3 | | | | | | | |
| Hardware-Software Codesign | | | | | | | | | |
| 雛型晶片設計 | 3 | 3 | | | | | | | |
| Prototyping Chip Design | | | | | | | | | |
| 電腦輔助最佳化設計 | 3 | 3 | | | | | | | |
| Computer Aided Optimization Design | | | | | | | | | |
| 非同步電路設計 | 3 | 3 | | | | | | | |
| Asynchronous Circuit Design | | | | | | | | | |
| 類比積體電路設計 | 3 | 3 | | | | | | | |
| Analog Integrated Circuit Design | | | | | | | | | |
| 類比積體電路設計技術 | 2 | 4 | | | | | | | |

Design Techniques of Analog
Integrated Circuits

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| 系 選 修 | 無 線 通 訊 組 (至 少 0 學 分) | 主動微波電路設計 Active Microwave Circuit Design | 3 | 3 | | | | | |
| | | 天線分析與設計專論 Topics in Antenna Analysis and Design | 3 | 3 | | | | | |
| | | 天線工程 Antenna Engineering | 3 | 3 | | | | | |
| | | 天線理論 Antenna Theory | 3 | 3 | | | | | |
| | | 射頻前端模組設計 RF Front End Module Design | 3 | 3 | | | | | |
| | | 射頻積體電路設計 Radio-Frequency Integrated Circuit Design | 3 | 3 | | | | | |
| | | 展頻通訊 Spread Spectrum Communication | 3 | 3 | | | | | |
| | | 微波主動元件分析與建模 Analysis and Modeling of Microwave Active Devices | 3 | 3 | | | | | |
| | | 微波元件設計與量測 Microwave Devices Design and Measurement | 3 | 3 | | | | | |
| | | 微波工程 Microwave Engineering | 3 | 3 | | | | | |
| | | 微波濾波器設計 Microwave Filter Design | 3 | 3 | | | | | |
| | | 微波積體電路設計 Microwave Integrated Circuit Design | 3 | 3 | | | | | |
| | | 數位訊號處理 Digital Signal Processing | 3 | 3 | | | | | |
| | | 數位通訊 Digital Communication | 3 | 3 | | | | | |
| | | 數值電磁分析 Computational Electromagnetics | 3 | 3 | | | | | |
| | | 無線區域網路系統 Wireless LAN Systems | 3 | 3 | | | | | |
| | | 無線通訊系統 Wireless Communication Systems | 3 | 3 | | | | | |
| | | 無線通訊網路 Wireless Communications and Networks | 3 | 3 | | | | | |
| | | 無線通訊訊號處理 Signal Processing for Wireless Communications | 3 | 3 | | | | | |
| | | 無線通道特性與干擾消除技術 Wireless Channels and Interference Cancellation Techniques | 3 | 3 | | | | | |
| | | 編碼理論 Coding Theory | 3 | 3 | | | | | |
| | | 被動微波電路設計 Passive Microwave Circuit Design | 3 | 3 | | | | | |
| | | 訊號與電源完整性分析 Analysis of Signal and Power Integrity | 3 | 3 | | | | | |
| | | 通訊系統分析與模擬 Analysis and Simulation of Communication Systems | 3 | 3 | | | | | |
| | | 通訊系統電路設計 Design of Communication Systems Circuit | 3 | 3 | | | | | |

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| | | 隨機程序與應用 Stochastic Process and Application | | | 3 | 3 | | | | |
| | | 高等編碼理論 Advanced Coding Theorem | 3 | 3 | | | | | | |
| | | 高等電磁學 Advanced Electromagnetism | 3 | 3 | | | | | | |

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| 先修科目 | | | | | | | | | | |
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| 畢業條件 | <p>一. 本系碩士班畢業學分為24學分(不含書報討論、論文指導、專題研究及教育學分)。</p> <p>二. 凡選修本系碩士班開設之科目(不限學期)，除第一項所列者外，一律承認為本系碩士班畢業學分。選修相關系所開設之研究所課程，經指導教授同意，得採認為畢業學分(上限6學分)。</p> <p>三. 口試前應完成下列二項要件始可提出學位考試申請：</p> <p>(一)該學期可修畢碩士班規定學分。</p> <p>(二)研究成果：至少有一篇研究成果論文被國內外學術期刊或學術性研討會論文集接受刊登，除教師外，作者排名序為第一。</p> <p>四. 通過學位論文口試。</p> <p>五. 【研究生應於申請學位考試前修習通過於「臺灣學術倫理教育資源中心」(https://ethics.nctu.edu.tw/)網路教學平台之「學術研究倫理教育」課程】等相關規定。</p> | | | | | | | | | |
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