

國立彰化師範大學 資訊工程學系學士班畢業條件表暨課程架構表  
111學年度入學學生適用

列印日期：2023/4/19

|     |     |                  | 第一學年                                       |    |    |    | 第二學年 |                                             |    |    | 第三學年 |    |                                                |    | 第四學年 |    |    |    |    |    |    |    |
|-----|-----|------------------|--------------------------------------------|----|----|----|------|---------------------------------------------|----|----|------|----|------------------------------------------------|----|------|----|----|----|----|----|----|----|
|     |     |                  | 科目                                         | 上  |    | 下  |      | 科目                                          | 上  |    | 下    |    | 科目                                             | 上  |      | 下  |    | 科目 | 上  |    | 下  |    |
|     |     |                  |                                            | 學分 | 學時 | 學分 | 學時   |                                             | 學分 | 學時 | 學分   | 學時 |                                                | 學分 | 學時   | 學分 | 學時 |    | 學分 | 學時 | 學分 | 學時 |
| 系必修 |     |                  | 微積分(一)<br>Calculus I                       | 3  | 3  |    |      | 微處理機技術<br>Practicum in Microprocessors      | 2  | 4  |      |    | 作業系統<br>Operating Systems                      | 3  | 3    |    |    |    |    |    |    |    |
|     |     |                  | 微積分(二)<br>Calculus II                      |    |    | 3  | 3    | 數位系統技術<br>Digital System Lab                |    |    | 2    | 4  | 機率論<br>Probability Theory                      |    |      | 3  | 3  |    |    |    |    |    |
|     |     |                  | 數位邏輯<br>Digital Logic                      |    |    | 3  | 3    | 程式語言理論<br>與實務                               |    |    | 3    | 3  | 計算機演算法<br>Computer Algorithms                  | 3  | 3    |    |    |    |    |    |    |    |
|     |     |                  | 物件導向程式設計<br>Object Oriented Program Design |    |    | 3  | 3    | Theory and Practice of Programming Language |    |    |      |    |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  | 程式設計<br>Program Design                     | 3  | 3  |    |      | 計算機組織<br>Computer Organization              |    |    | 3    | 3  |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  | 線性代數<br>Linear Algebra                     |    |    | 3  | 3    | 資料結構<br>Data Structure                      |    |    | 3    | 3  |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  | 計算機技術<br>Practicum in Computer             | 2  | 4  |    |      | 離散數學<br>Discrete Mathematics                | 3  | 3  |      |    |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  | 計算機概論<br>Introduction to Computer Science  | 3  | 3  |    |      | 電子學(一)<br>Electronics I                     |    |    | 3    | 3  |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  | 進階程式設計<br>Advanced Program Design          |    |    | 3  | 3    | 電子技術(一)<br>Electronic Technology I          |    |    | 1    | 2  |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  |                                            |    |    |    |      | 電腦網路<br>Computer Networks                   | 3  | 3  |      |    |                                                |    |      |    |    |    |    |    |    |    |
|     | 系必修 | 專題(一)<br>(至少2學分) |                                            |    |    |    |      |                                             |    |    |      |    | 系統整合專題(一)<br>Topics in System Integration I    |    |      | 2  | 4  |    |    |    |    |    |
|     |     |                  |                                            |    |    |    |      |                                             |    |    |      |    | 網路通訊專題(一)<br>Topics in Network Communication I |    |      | 2  | 4  |    |    |    |    |    |
|     |     |                  |                                            |    |    |    |      |                                             |    |    |      |    | 軟體發展專題(一)<br>Topics in Software Development I  |    |      | 2  | 4  |    |    |    |    |    |
|     |     |                  |                                            |    |    |    |      |                                             |    |    |      |    |                                                |    |      |    |    |    |    |    |    |    |
|     |     |                  |                                            |    |    |    |      |                                             |    |    |      |    |                                                |    |      |    |    |    |    |    |    |    |

[illegible]

專題(二)(至少2學分)

[illegible]

|             |  |  |  |  |  |                   |                   |   |   |   |   |                  |                  |   |   |   |                  |                  |   |   |   |   |   |
|-------------|--|--|--|--|--|-------------------|-------------------|---|---|---|---|------------------|------------------|---|---|---|------------------|------------------|---|---|---|---|---|
| 系<br>選<br>修 |  |  |  |  |  |                   | JAVA程式設計          | 3 | 3 |   |   |                  | Linux系統管理        |   |   | 3 | 3                | 人工智慧             | 3 | 3 |   |   |   |
|             |  |  |  |  |  |                   | Java Programming  |   |   |   |   |                  | Linux System     |   |   |   |                  | Artificial       |   |   |   |   |   |
|             |  |  |  |  |  |                   | 數位系統              | 3 | 3 |   |   |                  | Administration   |   |   |   |                  | Intelligence     |   |   |   |   |   |
|             |  |  |  |  |  |                   | Digital System    |   |   |   |   |                  | UNIX系統程式         |   |   | 3 | 3                | 企業資訊應用           | 3 | 3 |   |   |   |
|             |  |  |  |  |  |                   | 物件導向分析            |   |   | 3 | 3 |                  | 設計               |   |   |   |                  | 實務(一)            |   |   |   |   |   |
|             |  |  |  |  |  |                   | 與設計               |   |   |   |   |                  | Unix System      |   |   |   |                  | Hands on Lab of  |   |   |   |   |   |
|             |  |  |  |  |  |                   | Object-Oriented   |   |   |   |   |                  | Programming      |   |   |   |                  | Information      |   |   |   |   |   |
|             |  |  |  |  |  |                   | Analysis and      |   |   |   |   |                  | 免執照頻段之           | 3 | 3 |   |                  | System for       |   |   |   | 3 | 3 |
|             |  |  |  |  |  |                   | Design            |   |   |   |   |                  | 無線通訊系統           |   |   |   |                  | 企業資訊應用           |   |   |   |   |   |
|             |  |  |  |  |  |                   | 硬體描述語言            | 3 | 3 |   |   |                  | Wireless         |   |   |   |                  | 實務(二)            |   |   |   |   |   |
|             |  |  |  |  |  |                   | Hardware          |   |   |   |   |                  | Communication on |   |   |   |                  | Hands on Lab of  |   |   |   |   |   |
|             |  |  |  |  |  |                   | Description       |   |   |   |   |                  | Unlicensed Band  |   |   | 3 | 3                | Information      |   |   |   |   |   |
|             |  |  |  |  |  |                   | Language          |   |   |   |   |                  | 分散式系統            |   |   |   |                  | System for       |   |   |   |   |   |
|             |  |  |  |  |  |                   | 科技英文              | 2 | 2 |   |   |                  | Distributed      |   |   |   |                  | 大數據分析實           | 3 | 3 |   |   |   |
|             |  |  |  |  |  |                   | Technical and     |   |   |   |   |                  | Systems          |   |   |   |                  | 務                |   |   |   |   |   |
|             |  |  |  |  |  |                   | Scientific        |   |   |   |   |                  | 分波多工網路           | 3 | 3 |   |                  | Practice of big  |   |   |   |   |   |
|             |  |  |  |  |  |                   | English           |   |   |   |   |                  | Wavelength       |   |   |   |                  | data analysis    |   |   |   |   |   |
|             |  |  |  |  |  |                   | 系統分析與設            |   |   | 3 | 3 |                  | Division         |   |   |   |                  | 專家系統             |   |   |   | 3 | 3 |
|             |  |  |  |  |  |                   | 計                 |   |   |   |   |                  | Multiplexing     |   |   |   |                  | Expert Systems   |   |   |   |   |   |
|             |  |  |  |  |  |                   | System Analysis & |   |   |   |   |                  | Network          |   |   |   |                  | 嵌入式系統程           | 3 | 3 |   |   |   |
|             |  |  |  |  |  |                   | Design            |   |   |   |   |                  | 區域網路             | 3 | 3 |   |                  | 式設計              |   |   |   |   |   |
|             |  |  |  |  |  |                   | 網際網路資料            |   |   | 3 | 3 |                  | Local Area       |   |   |   |                  | Embedded Systems |   |   |   |   |   |
|             |  |  |  |  |  |                   | 庫程式設計             |   |   |   |   |                  | Netwrok          |   |   |   |                  | Programming      |   |   |   |   |   |
|             |  |  |  |  |  |                   | Internet Database |   |   |   |   |                  | 可程式邏輯設           | 3 | 3 |   |                  | 排隊理論             | 3 | 3 |   |   |   |
|             |  |  |  |  |  |                   | Programming       |   |   |   |   |                  | 計                |   |   |   |                  | Queuing Theory   |   |   |   |   |   |
|             |  |  |  |  |  |                   | 資料庫系統             |   |   | 3 | 3 |                  | Programmable     |   |   |   |                  | 模糊邏輯             |   |   |   | 3 | 3 |
|             |  |  |  |  |  |                   | Database System   |   |   |   |   |                  | Logic Design     |   |   |   |                  | Fuzzy Logic      |   |   |   |   |   |
|             |  |  |  |  |  |                   | 電子學(二)            | 3 | 3 |   |   |                  | 圖形理論             |   |   | 3 | 3                | 機器學習             | 3 | 3 |   |   |   |
|             |  |  |  |  |  |                   | Electronics II    |   |   |   |   |                  | Graph theory     |   |   |   |                  | Machine Learning |   |   |   |   |   |
|             |  |  |  |  |  |                   | 電子技術(二)           | 1 | 2 |   |   |                  | 密碼學與資訊           |   |   | 3 | 3                | 次世代無線區           |   |   |   | 3 | 3 |
|             |  |  |  |  |  |                   | Electronic        |   |   |   |   |                  | 安全               |   |   |   |                  | 域網路通訊協           |   |   |   |   |   |
|             |  |  |  |  |  |                   | Technology II     |   |   |   |   |                  | Cryptography &   |   |   |   |                  | 定                |   |   |   |   |   |
|             |  |  |  |  |  |                   | 電腦網路進階            |   |   | 3 | 3 |                  | Information      |   |   |   |                  | Next Generation  |   |   |   |   |   |
|             |  |  |  |  |  | Advanced Computer |                   |   |   |   |   | Security         |                  |   | 3 | 3 | Wireless Local   |                  |   |   |   |   |   |
|             |  |  |  |  |  | Networks          |                   |   |   |   |   | 嵌入式系統            |                  |   |   |   | Area Networks    |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Embedded Systems |                  |   |   |   | 系統晶片設計           | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 平行計算             |                  |   |   |   | 導論               |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Parallel         |                  |   |   |   | The Introduction |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Computing        |                  |   |   |   | of System chip   |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 平行計算最佳           |                  |   | 3 | 3 | Design           |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 化技術              |                  |   |   |   | 統計學              | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Optimized        |                  |   |   |   | Statistics       |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Parallel         |                  |   |   |   | 計算機視覺            | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Computing        |                  |   |   |   | Computer Vision  |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 感知器原理及           | 3                | 3 |   |   | 計算理論             | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 應用               |                  |   |   |   |                  |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Sensor           |                  |   |   |   | Computing Theory |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Principles and   |                  |   |   |   | 資訊工程與科           |                  |   |   | 3 | 3 |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Applications     |                  |   |   |   | 技法律              |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 數位影像處理           |                  |   | 3 | 3 | Information      |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Digital Image    |                  |   |   |   | Technology and   |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Processing       |                  |   |   |   | Technology Law   |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 數位晶片設計           | 3                | 3 |   |   | 資訊檢索與探           | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Digital Chip     |                  |   |   |   | 勘                |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Design           |                  |   |   |   | Information      |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 智慧物聯網實           |                  |   | 3 | 3 | Retrieval and    |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 務                |                  |   |   |   | Data Mining      |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Practice of      |                  |   |   |   | 車載通訊技術           | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Internet of      |                  |   |   |   | Vehicular        |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | Things           |                  |   |   |   | Communication    |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 無人機程式設           | 3                | 3 |   |   | Techniques       |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   | 計                |                  |   |   |   | 電腦動畫             | 3                | 3 |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   |                  |                  |   |   |   | Computer         |                  |   |   |   |   |   |
|             |  |  |  |  |  |                   |                   |   |   |   |   |                  |                  |   |   |   | Animation        |                  |   |   |   |   |   |





|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 先修科目 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 畢業條件 | <p>一、本系最低畢業學分為128學分，包含校必修28學分、系必修62學分、選修38學分;不含軍訓護理、體育、資訊科技科教材教法、資訊科技科教學實習及教育學程。</p> <p>二、凡選修本系開設科目一律採認為本系畢業學分;修習外系開設科目，採認10學分為本系畢業學分。</p> <p>三、除轉學生、復學生、轉系生、國外交換回國學生或重修生外，本系規定必(選)修科目，必須修本系所開的課程，學生不得以任何理由要求選修他系或他校系之相同或類似課程作為抵免。</p> <p>四、修習外系(含外校)科目抵免本系必/選修課程</p> <p>(一)適用對象:轉學生、轉系生、復學生、國外交換回國生、重修生(不含停修生)</p> <p>(二)須事先提出申請，經系課程委員會審核通過後方可修習。</p> <p>(三)修習課程選擇系所優先以工學院各系、資訊管理學系、數學系所開課程為第一優先序；因衝堂再以理學院各相關所所開課程為第二優先序，再衝堂方可選擇其他校系所所開課程。</p> <p>(四)轉學生、轉系生、復學生、國外交換回國生修習外系課程抵免本系必/選修課程，學分不佔其修習外系開設科目之10學分。</p> <p>(五)重修生修習外系抵免本系必/選修課程，學分將列為其修習外系開設科目之10學分。</p> <p>五、學生畢業前須通過資訊檢定測驗門檻：通過取得國外微軟、Cisco、Oracle、IBM、HP、Sun Java、Novel、Linux、Adobe等證書、CPE(參與檢定當次絕對成績為初級以上或相對成績採ACM-ICPC之排名規則為當次參測人數前三分之二者，其中之一)、獲得科技部大專生計畫、參加各項程式設計或資訊競賽(地區性以上)得到佳作以上，或經系務會議審查通過(含專題成果獲國內外資訊科技相關期刊或研討會接受或發表。)</p> <p>六、選修本系為輔系者至少須修完本系必修專業課程42學分。(修習系外開設科目其學科名稱、學分數相同者，採認6學分為本系畢業學分，惟修習前須先申請經系課程委員會核准方可選修。)</p> <p>七、選修本系為雙主修者至少須修完本系專業課程66學分(必修專業課程至少42學分以上)。(修習系外開設科目其學科名稱、學分數相同者，採認9學分為本系畢業學分，惟修習前須先申請經系課程委員會核准方可選修。)</p> <p>八、畢業總學分數之遠距教學課程學分數，不得超過畢業總學分數之二分之一。</p> |