

國防大學理工學院國防科學研究所  
博士班 114 年班（第 41 期）教育計畫

附件 2

| 國防大學理工學院國防科學研究所博士班<br>114 年班（第 41 期）必修科目學分時數配當表 |                                           |      |        |    |    |    |        |    |    |    |                             |
|-------------------------------------------------|-------------------------------------------|------|--------|----|----|----|--------|----|----|----|-----------------------------|
| 區分                                              | 科目名稱                                      | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                          |
|                                                 |                                           |      | 上      |    | 下  |    | 上      |    | 下  |    |                             |
|                                                 |                                           |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                             |
| 共同必修                                            | 論文<br>Thesis                              | 12   |        | 1  |    | 1  |        | 1  |    | 1  |                             |
|                                                 | 專題討論<br>Seminar                           | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                             |
|                                                 | 軍事科技研究<br>Study in Military<br>Technology | 3    |        |    | 3  | 3  |        |    |    |    |                             |
|                                                 | 學分小計                                      | 17   | 0      | 3  | 3  | 6  | 0      | 3  | 0  | 3  |                             |
| 畢業學分                                            |                                           | 35   |        |    |    |    |        |    |    |    | 餘 18 學分為：1.共同選修、<br>2.各組選修。 |

國防大學理工學院國防科學研究所（博士班）  
114 年班（第 41 期）共同選修科目學分時數配當表

| 區分   | 科目名稱                                                                 | 規定學分 | 第一學年 |    |    |    | 第二學年 |    |    |    | 備考                                                     |
|------|----------------------------------------------------------------------|------|------|----|----|----|------|----|----|----|--------------------------------------------------------|
|      |                                                                      |      | 上    |    | 下  |    | 上    |    | 下  |    |                                                        |
|      |                                                                      |      | 學分   | 時數 | 學分 | 時數 | 學分   | 時數 | 學分 | 時數 |                                                        |
| 共同選修 | 中級英語<br>Intermediate English                                         | 0    | 0    | 3  |    |    |      |    |    |    | 1.通識教育中心(中正嶺)<br>2.本院博士班未取得英文能力鑑定成績者(詳修業規定)，須加修「中級英語」。 |
|      | 系統工程與管理<br>Systems Engineering and Management                        | 3    | 3    | 3  |    |    |      |    |    |    | 動力系                                                    |
|      | 危機管理<br>Crisis Management                                            | 3    | 3    | 3  |    |    |      |    |    |    |                                                        |
|      | 企業架構與系統工程(1)<br>Enterprise Architecture & Systems Engineering(1)     | 3    | 3    | 3  |    |    |      |    |    |    | 國科所                                                    |
|      | 科技論文寫作<br>Technical Writing                                          | 2    |      |    | 2  | 2  |      |    |    |    | 教學支援中心                                                 |
|      | 工程師責任與倫理<br>Engineers' Responsibility and Ethics                     | 2    |      |    | 2  | 2  |      |    |    |    |                                                        |
|      | 企業架構與系統工程(2)<br>Enterprise Architecture & Systems Engineering(2)     | 3    |      |    | 3  | 3  |      |    |    |    | 國科所                                                    |
|      | 防災管理與國土安全<br>Management of Disaster Prevention and Homeland Security | 3    |      |    | 3  | 3  |      |    |    |    |                                                        |
|      | C4ISR 系統整合<br>C4ISR System Integration                               | 3    |      |    | 3  | 3  |      |    |    |    | 資工系                                                    |
|      | C4ISR 架構設計<br>C4ISR Architecture Design                              | 3    |      |    |    |    | 3    | 3  |    |    | 資工系                                                    |
|      | 科技管理與政策<br>Technology Management and Strategy                        | 3    |      |    |    |    | 3    | 3  |    |    | 國科所                                                    |
| 學分小計 |                                                                      |      |      |    |    |    |      |    |    |    |                                                        |

國防大學理工學院國防科學研究所博士班  
114 年班（第 41 期）資訊工程組科目學分時數配當表

| 區分  | 科目名稱                                                              | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                                                                                                                                                                                                                                                                                                                                                 |
|-----|-------------------------------------------------------------------|------|--------|----|----|----|--------|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                                                   |      | 上      |    | 下  |    | 上      |    | 下  |    |                                                                                                                                                                                                                                                                                                                                                    |
|     |                                                                   |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                                                                                                                                                                                                                                                                                                                                                    |
| 組必修 | 論文<br>Thesis                                                      | 12   |        | 1  |    | 1  |        | 1  |    | 1  | 1.最低畢業學分為 35 學分。<br>2.論文須俟學位口試通過後始賦予 12 學分（第 1 至 4 學期每週 1 小時，第 5 學期起每週 2 小時）。<br>3.專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分（提前畢業者，核算至學位口試之前 1 學期）。<br>4.除本組選修課程外，研究生得依需要經指導教授、組長及所長同意後選修本所其它各組跨領域相關課程（成績及所獲學分登錄於成績單中，其中 2 門（6 學分）得列計為最低畢業學分）。<br>5.重複選修本院碩士班已選修之課程，不列計為最低畢業學分。<br>6.跨校選修依本校學則辦理。<br>7.選修開課學期得視需要調整。 |
|     | 專題討論<br>Seminar                                                   | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                                                                                                                                                                                                                                                                                                                                                    |
|     | 軍事科技研究<br>Study in Military Technology                            | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 必修學分小計                                                            |      | 17     | 0  | 3  | 3  | 6      | 0  | 3  | 0  |                                                                                                                                                                                                                                                                                                                                                    |
| 組選修 | 計算機結構<br>Computer Architecture                                    | 3    | 3      | 3  |    |    |        |    |    |    | 組選修<br>1.組選修課程之核心課程包含有：計算機結構、計算機網路、資料庫系統、演算法、軟體工程等 5 門課程。<br>2.研究生須於核心課程之中至少選修 1 門。                                                                                                                                                                                                                                                                |
|     | 計算機網路<br>Computer Networks                                        | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 資料庫系統<br>Database Systems                                         | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 演算法<br>Algorithms                                                 | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 軟體工程<br>Software Engineering                                      | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 計算機數學<br>Computer Mathematics                                     | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 作業系統<br>Operating Systems                                         | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 先進資訊科技<br>Advanced Information Technology                         | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 隨機過程<br>Stochastic Process                                        | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 高等應用數學<br>Advanced Applied Mathematics                            | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 高等人工智慧<br>Advanced Artificial Intelligence                        | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |
|     | 系統設計分析特論<br>Special Topics on Systems Design and Analysis Methods | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                    |

|                 |                                                                    |   |   |   |   |   |   |   |     |                                                                                                            |
|-----------------|--------------------------------------------------------------------|---|---|---|---|---|---|---|-----|------------------------------------------------------------------------------------------------------------|
| C4ISR 與模式模擬族群選修 | 高等 C4ISR 架構設計<br>Advanced Architectural Design of C4ISR            | 3 | 3 | 3 |   |   |   |   |     | C4ISR 與模式模擬族群選修<br>1. 本族群課程之核心課程包含有：高等計算機模擬、高等 C4ISR 架構設計等 2 門課程。<br>2. 研究生須於核心課程之中至少選修 1 門，跨族群課程至少選修 1 門。 |
|                 | 高等計算機模擬<br>Advanced Computer Simulation                            | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 高等物件導向分析與設計<br>Advanced Object-Oriented System Analysis and Design | 3 |   |   | 3 | 3 |   |   |     |                                                                                                            |
|                 | 分散式模擬特論<br>Special Topics on Distributed Simulation                | 3 |   |   | 3 | 3 |   |   |     |                                                                                                            |
|                 | 作業研究特論<br>Special Topics on Operations Research                    | 3 |   |   | 3 | 3 |   |   |     |                                                                                                            |
|                 | 高等共通作業環境<br>Advanced Common Operational Environment                | 3 |   |   |   |   | 3 | 3 |     |                                                                                                            |
|                 | 系統工程與管理特論<br>Special Topics on Systems Engineering and Management  | 3 |   |   |   |   | 3 | 3 |     |                                                                                                            |
|                 | C4ISR 與模式模擬特論<br>Special Topics in C4ISR and Simulation Modeling   | 3 |   |   |   |   | 3 | 3 |     |                                                                                                            |
|                 | 軟體工程特論<br>Special Topics on Software Engineering                   | 3 |   |   |   |   |   |   | 3 3 |                                                                                                            |
| 資訊系統與網路族群選修     | 管理資訊系統理論與實務<br>Management Information Systems                      | 3 | 3 | 3 |   |   |   |   |     | 資訊系統與網路族群選修<br>1. 本族群課程之核心課程包含有：高等作業系統、資訊系統特論等 2 門課程。<br>2. 研究生須於核心課程之中至少選修 1 門，跨族群課程至少選修 1 門。             |
|                 | XML 技術應用<br>Application of XML Technology                          | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 高等物件導向分析與設計<br>Advanced Object-Oriented System Analysis and Design | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 數位影像處理<br>Digital Image Processing                                 | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 人機介面分析與設計<br>Human Machine Interface Analysis and Design           | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 計算機通訊<br>Computer Communications                                   | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 網際網路技術<br>Internet Technologies                                    | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 無線網路<br>Wireless Networks                                          | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 通訊協定設計<br>Communication Protocols Design                           | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 資料探勘<br>Data Mining                                                | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 高等編譯器理論<br>Advanced Compiler Theory                                | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 高等作業系統<br>Advanced Operating Systems                               | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |
|                 | 資訊系統特論<br>Special Topics on Information Systems                    | 3 | 3 | 3 |   |   |   |   |     |                                                                                                            |

|         |                                                                       |   |   |   |   |   |   |   |   |   |  |
|---------|-----------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|--|
|         | 數位訊號處理特論<br>Special Topics on Digital Signal Processing               | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 深度學習<br>Deep Learning                                                 | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 模糊理論與應用特論<br>Special Topics on Fuzzy Set Theory and It's Applications | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 類神經網路特論<br>Special Topics on Neural Networks                          | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 網路模擬特論<br>Special Topics on Network Simulation                        | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 網路程式設計<br>Network Programming                                         | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 排隊理論特論<br>Special Topics on Queuing Theory                            | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 圖形識別<br>Pattern Recognition                                           | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 嵌入式系統特論<br>Special Topics on Embedded System                          | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 高等計算機網路<br>Advanced Computer Networks                                 | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 高等計算機結構<br>Advanced Computer Architecture                             | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 高等資料庫系統<br>Advanced Database Systems                                  | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 高等演算法<br>Advanced Algorithms                                          | 3 |   |   | 3 | 3 |   |   |   |   |  |
|         | 虛擬實境<br>Virtual Reality                                               | 3 |   |   |   |   | 3 | 3 |   |   |  |
|         | 分散式系統特論<br>Special Topics on Distributed Operating Systems            | 3 |   |   |   |   | 3 | 3 |   |   |  |
|         | 高速網路特論<br>Special Topics on High Speed Networks                       | 3 |   |   |   |   | 3 | 3 |   |   |  |
|         | 計算機視覺特論<br>Special Topics on Computer Vision                          | 3 |   |   |   |   | 3 | 3 |   |   |  |
|         | 多媒體系統特論<br>Special Topics on Multimedia System                        | 3 |   |   |   |   |   |   | 3 | 3 |  |
| 資訊戰族群選修 | 網路管理<br>Network Management                                            | 3 | 3 | 3 |   |   |   |   |   |   |  |
|         | 密碼學特論<br>Special Topics on Cryptography                               | 3 | 3 | 3 |   |   |   |   |   |   |  |
|         | 資訊安全特論<br>Special Topics on Information Security                      | 3 | 3 | 3 |   |   |   |   |   |   |  |
|         | 數位影像處理特論<br>Special Topics on Digital Image Processing                | 3 |   |   | 3 | 3 |   |   |   |   |  |

資訊戰族群選修

1. 本族群課程之核心課程包含有：密碼學特論、資訊安全特論等 2 門課程。
2. 研究生須於核心課程之中至少選修 1 門，跨族群課程至少選修 1 門。

|                                                                                              |    |  |  |   |   |   |   |   |   |  |
|----------------------------------------------------------------------------------------------|----|--|--|---|---|---|---|---|---|--|
| 網路安全防護<br>Network Security<br>Defensive Technology                                           | 3  |  |  | 3 | 3 |   |   |   |   |  |
| 網路安全<br>Network Security                                                                     | 3  |  |  | 3 | 3 |   |   |   |   |  |
| 資訊確保<br>Information Assurance                                                                | 3  |  |  | 3 | 3 |   |   |   |   |  |
| 資訊戰與資訊安全特論<br>Special Topics on<br>information warfare and<br>Information Security           | 3  |  |  | 3 | 3 |   |   |   |   |  |
| 多媒體安全<br>Multimedia Security                                                                 | 3  |  |  |   |   | 3 | 3 |   |   |  |
| 網路安全防護特論<br>Advanced Network Security<br>Defensive Technology                                | 3  |  |  |   |   | 3 | 3 |   |   |  |
| 資訊確保架構設計特論<br>Special Topics on Design<br>of the Infrastructure for<br>Information Assurance | 3  |  |  |   |   | 3 | 3 |   |   |  |
| 資訊安全風險評估<br>Information Security Risk<br>Assessment                                          | 3  |  |  |   |   | 3 | 3 |   |   |  |
| 軟體工程特論<br>Special Topics on<br>Software Engineering                                          | 3  |  |  |   |   |   |   | 3 | 3 |  |
| 決策支援系統<br>Decision Support Systems                                                           | 3  |  |  |   |   |   |   | 3 | 3 |  |
| 數位鑑識特論<br>Special Topics on Digital<br>Forensics                                             | 3  |  |  |   |   |   |   | 3 | 3 |  |
| 行動通訊安全特論<br>Special Topics on Wireless<br>and Mobile Security                                | 3  |  |  |   |   |   |   | 3 | 3 |  |
| 選修學分小計                                                                                       | 18 |  |  |   |   |   |   |   |   |  |
| 學分合計                                                                                         | 35 |  |  |   |   |   |   |   |   |  |

國防大學理工學院國防科學研究所（博士班）  
114 年班（第 41 期）化學及材料工程組科目學分時數配當表

| 區分     | 科目名稱                                             | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |
|--------|--------------------------------------------------|------|--------|----|----|----|--------|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|        |                                                  |      | 上      |    | 下  |    | 上      |    | 下  |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        |                                                  |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
| 組必修    | 論文<br>Thesis                                     | 12   |        | 1  |    | 1  |        | 1  |    | 1  | 1. 最低畢業學分為 35 學分。<br>2. 論文須俟學位口試通過後始賦予 12 學分（第 1 至 4 學期每週 1 小時，第 5 學期起每週 2 小時）。<br>3. 專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分（提前畢業者，核算至學位口試之前 1 學期）。<br>4. 除本組選修課程外，研究生得依需要經指導教授、組長及所長同意後選修本所其它各組跨領域相關課程（成績及所獲學分登錄於成績單中，其中 1 門（3 學分）得列計為最低畢業學分）。<br>5. 重複選修本院碩士班已選修之課程，不列計為最低畢業學分。<br>6. 跨校選修依本校學則辦理。<br>7. 選修開課學期得視需要調整。 |                                                                                                                                   |
|        | 專題討論<br>Seminar                                  | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 軍事科技研究<br>Study in Military Technology           | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 必修學分小計                                           |      | 17     | 0  | 3  | 3  | 6      | 0  | 3  | 0  |                                                                                                                                                                                                                                                                                                                                                           | 3                                                                                                                                 |
| 化學族群選修 | 物理化學特論<br>Special Topics on Physical Chemistry   | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           | 化學族群選修<br>1. 本族群課程之核心課程包含有：物理化學特論、高等火藥分析、有機化學特論、無機化學特論、分析化學特論及高分子複合材料特論等 6 門課程。<br>2. 研究生須於核心課程之中至少選修 3 門，同時跨族群(化工或材料)課程至少選修 1 門。 |
|        | 量子化學特論<br>Special Topics on Quantum Chemistry    | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 有機合成特論<br>Special Topics on Organic Synthesis    | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 光電材料化學<br>Optoelectronic Materials Science       | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 有機-無機聚合物<br>Organic-Inorganic Polymers           | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 有機化學特論<br>Special Topics on Organic Chemistry    | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 無機化學特論<br>Special Topics on Inorganic Chemistry  | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 分析化學特論<br>Special Topics on Analytical Chemistry | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 高等火藥分析<br>Advanced Explosive Analysis            | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 分子光譜學<br>Molecular Spectroscopy                  | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |
|        | 催化劑合成<br>Synthesis of Catalysts                  | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |

|        |                                                                  |   |   |   |   |   |   |   |   |   |                                                                                                                                  |
|--------|------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|----------------------------------------------------------------------------------------------------------------------------------|
|        | 固態化學特論<br>Special Topics on Solid State Chemistry                | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                                  |
|        | 微波吸收材料<br>Microwave Absorbing Materials                          | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                                  |
|        | 稀土金屬化合物<br>Compounds of Rare Earth Metals                        | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                                  |
|        | 高分子複合材料特論<br>Special Topics on Polymer Composite Materials       | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                                  |
|        | 有機金屬化學特論<br>Special Topics on Organometallic Chemistry           | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                                  |
|        | 火藥合成特論<br>Special Topics on Explosive Synthesis                  | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                                  |
|        | 奈米材料化學特論<br>Special Topics on Nanomaterials Chemistry            | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                                  |
|        | 放射化學特論<br>Special Topics on Radiochemistry                       | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                                  |
|        | 化學熱力學特論<br>Special Topics on Chemical Thermodynamics             | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                                  |
|        | 無機合成特論<br>Special Topics on Inorganic Synthesis                  | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                                  |
|        | 強吸附化學材料特論<br>Special Topics on Strong Absorption Materials       | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                                  |
|        | 化學動力學特論<br>Special Topics on Chemical Kinetics                   | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                                  |
|        | 火藥反應機構<br>Explosives Reaction Mechanism                          | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                                  |
|        | 燃料電池與氫能特論<br>Special Topics on Fuel Cell and Hydrogen Energy     | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                                  |
| 化工族群選修 | 火藥特論<br>Special Topics on Explosive                              | 3 | 3 | 3 |   |   |   |   |   |   | 化工族群選修<br>1. 本族群課程之核心課程包含有：火藥特論、輸送現象特論、化學反應工程特論、化工熱力學特論、化工分離技術特論及電化學特論等 6 門課程。<br>2. 研究生須於核心課程之中至少選修 3 門，同時跨族群(化學或材料)課程至少選修 1 門。 |
|        | 化工熱力學特論<br>Special Topics on Chemical Engineering Thermodynamics | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                                  |
|        | 輸送現象特論<br>Special Topics on Transport Phenomena                  | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                                  |
|        | 化學反應工程特論<br>Special Topics on Chemical Reaction Engineering      | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                                  |
|        | 電化學特論<br>Special Topics on Electrochemistry                      | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                                  |

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|---------------------------------------------------------------------|---|---|---|---|---|---|---|--|--|
| 高分子學特論<br>Special Topics on<br>Macromolecules                       | 3 | 3 | 3 |   |   |   |   |  |  |
| 程序安全學特論<br>Special Topics on Process<br>Safety                      | 3 | 3 | 3 |   |   |   |   |  |  |
| 程序最適學特論<br>Special Topics on Process<br>Optimization                | 3 | 3 | 3 |   |   |   |   |  |  |
| 高分子加工特論<br>Special Topics on Polymer<br>Processing                  | 3 | 3 | 3 |   |   |   |   |  |  |
| 聚合物反應工程<br>Polymer Reaction<br>Engineering                          | 3 |   |   | 3 | 3 |   |   |  |  |
| 高分子機械性質特論<br>Special Topics on Mechanical<br>Properties of Polymer  | 3 |   |   | 3 | 3 |   |   |  |  |
| 質量傳送特論<br>Special Topics on Mass<br>Transfer                        | 3 |   |   | 3 | 3 |   |   |  |  |
| 聚合物結構與物性特論<br>Special Topics on Polymer<br>Structure and Properties | 3 |   |   | 3 | 3 |   |   |  |  |
| 火藥製程安全學特論<br>Special Topics on<br>Explosive Process Safety          | 3 |   |   | 3 | 3 |   |   |  |  |
| 程序控制特論<br>Special Topics on<br>Advanced Process Control             | 3 |   |   | 3 | 3 |   |   |  |  |
| 推進劑學特論<br>Special Topics on Rocket<br>Propellant                    | 3 |   |   | 3 | 3 |   |   |  |  |
| 高等爆炸理論<br>Advanced Detonation<br>Theory                             | 3 |   |   | 3 | 3 |   |   |  |  |
| 電極動力學特論<br>Special Topics on<br>Electrode Kinetics                  | 3 |   |   | 3 | 3 |   |   |  |  |
| 界面現象<br>Interfacial Phenomena                                       | 3 |   |   |   |   | 3 | 3 |  |  |
| 微細製造特論<br>Special Topics on<br>Microfabrication                     | 3 |   |   |   |   | 3 | 3 |  |  |
| 化工分離技術特論<br>Special Topics on Separation<br>Process Technology      | 3 |   |   |   |   | 3 | 3 |  |  |
| 燃燒學特論<br>Special Topics on<br>Combustion                            | 3 |   |   |   |   | 3 | 3 |  |  |
| 高分子流變學特論<br>Special Topics on Polymer<br>Rheology                   | 3 |   |   |   |   | 3 | 3 |  |  |
| 觸媒反應工程特論<br>Special Topics on<br>Catalytic Reaction                 | 3 |   |   |   |   | 3 | 3 |  |  |

|        |                                                               |   |   |   |   |   |   |   |   |   |                                                                                                                              |
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| 材料族群選修 | 電子顯微分析特論<br>Special Topics on Electron Microscopy             | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                              |
|        | 熱分析特論<br>Special Topics on Thermal Analysis                   | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                              |
|        | 粉粒體技術特論<br>Special Topics on Powder Technology                | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                              |
|        | 生化工程特論<br>Special Topics on Biochemical Engineering           | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                              |
|        | 火藥工廠設計<br>Explosive Plant Design                              | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                              |
|        | 陶瓷製程特論<br>Special Topics on Ceramic Processing                | 3 |   |   |   |   |   |   | 3 | 3 |                                                                                                                              |
|        | 材料熱力學特論<br>Special Topics on Materials Thermodynamics         | 3 | 3 | 3 |   |   |   |   |   |   | 材料族群選修<br>1. 本族群課程之核心課程包含有：材料熱力學特論、物理冶金學特論、材料動力學特論、材料分析特論、X光分析特論及材料光電磁特論等6門課程。<br>2. 研究生須於核心課程之中至少選修3門，同時跨族群(化學或化工)課程至少選修1門。 |
|        | 物理冶金學特論<br>Special Topics on Physical Metallurgy              | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                              |
|        | 材料動力學特論<br>Special Topics on Kinetics of Materials            | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                              |
|        | X光分析特論<br>Special Topics on X-ray Diffraction                 | 3 | 3 | 3 |   |   |   |   |   |   |                                                                                                                              |
|        | 奈米科技與工程特論<br>Special Topics on Nano Science and Technology    | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                              |
|        | 薄膜工程特論<br>Special Topics on Thin Films Processing             | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                              |
|        | 腐蝕工程特論<br>Special Topics on Corrosion                         | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                              |
|        | 實驗設計法<br>Design and Analysis of Experiments                   | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                              |
|        | 匿蹤材料學特論<br>Special Topics on Stealth Materials                | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                              |
|        | 材料加工學特論<br>Special Topics on Machining of Materials           | 3 |   |   | 3 | 3 |   |   |   |   |                                                                                                                              |
|        | 光顯示材料特論<br>Special Topics on Display Technology and Materials | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                              |
|        | 材料分析特論<br>Special Topics on Characterization of Materials     | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                              |
|        | 高等固化理論<br>Advanced Solidification Theory                      | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                              |
|        | 粉末冶金特論<br>Special Topics on Powder Metallurgy                 | 3 |   |   |   |   | 3 | 3 |   |   |                                                                                                                              |

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|----------------------------------------------------------------------------------------------|----|--|--|--|--|---|---|---|---|--|
| 材料光電磁特論<br>Special Topics on Optical,<br>Electronic, and Magnetic<br>Properties of Materials | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 破壞分析特論<br>Special Topics on Failures<br>Analysis                                             | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 高溫材料學特論<br>Special Topics on High<br>Temperature Materials                                   | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 銲接學特論<br>Special Topics on Theory<br>of Welding                                              | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 磨潤學特論<br>Special Topics on<br>Tribology                                                      | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 電子構裝特論<br>Special Topics on<br>Electronic Packaging                                          | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 半導體材料與製程特論<br>Special Topics on<br>Semiconductor Materials<br>and Process                    | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 儲能材料特論<br>Special Topics on Energy<br>Storage Materials                                      | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 光電材料特論<br>Special Topics on Materials<br>for Optoelectronics                                 | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 系統工程與材料特論<br>Special Topics on Weapon<br>Systems and Materials                               | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 高等光電子學<br>Advanced Introduction to<br>Optoelectronics                                        | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 固態物理特論<br>Special Topics on<br>Solid-State Physics                                           | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 選 修 學 分 小 計                                                                                  | 18 |  |  |  |  |   |   |   |   |  |
| 學 分 合 計                                                                                      | 35 |  |  |  |  |   |   |   |   |  |

國防大學理工學院國防科學研究所（博士班）  
114 年班（第 41 期）環境資訊及工程組科目學分時數配當表

| 區分       | 科目名稱                                                       | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|------------------------------------------------------------|------|--------|----|----|----|--------|----|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                            |      | 上      |    | 下  |    | 上      |    | 下  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          |                                                            |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 組必修      | 論文<br>Thesis                                               | 12   |        | 1  |    | 1  |        | 1  |    | 1  | 1. 最低畢業學分為 35 學分。<br>2. 論文須俟學位口試通過後始賦予 12 學分（第 1 至 4 學期每週 1 小時，第 5 學期起每週 2 小時）。<br>3. 專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分（提前畢業者，核算至學位口試之前 1 學期）。<br>4. 除本組選修課程外，研究生得依需要經指導教授、組長及所長同意後選修本所其它各組跨領域相關課程（成績及所獲學分登錄於成績單中，其中 2 門（6 學分）得列計為最低畢業學分）<br>5. 本組研究生得依需要經指導教授、組長及所長同意後選修本院大氣科學、空間科學、軍事工程等 3 個碩士班之教育計畫所列課程，（成績及所獲學分登錄於成績單中，其中 2 門（6 學分）得列計為最低畢業學分）。<br>6. 重複選修本院碩士班已選修之課程，不列計為最低畢業學分。<br>7. 跨校選修依本校學則辦理。<br>8. 選修開課學期得視需要調整。 |
|          | 專題討論<br>Seminar                                            | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 軍事科技研究<br>Study in Military Technology                     | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 必修學分小計   |                                                            | 17   | 0      | 3  | 3  | 6  | 0      | 3  | 0  | 3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 大氣科學族群選修 | 動力氣象學特論<br>Specific Topics on Dynamic Meteorology          | 3    | 3      | 3  |    |    |        |    |    |    | 大氣科學族群選修<br>1. 本族群課程之核心課程包含有：動力氣象學特論、天氣學特論、中尺度氣象學特論、數值天氣預報特論、大氣遙測特論、雷達氣象特論等 6 門課程。<br>2. 研究生須於核心課程之中至少選修 2 門。                                                                                                                                                                                                                                                                                                                                                      |
|          | 天氣學特論<br>Special Topics on Synoptic Meteorology            | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 數值分析特論<br>Special Topics on Numerical Analysis             | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 大氣遙測特論<br>Special Topics on Atmospheric Remote Sensing     | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 中尺度氣象學特論<br>Special Topics on Meso-scale Meteorology       | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 熱帶氣象學特論<br>Specific Topics on Tropical Meteorology         | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 數值天氣預報特論<br>Special Topics on Numerical Weather Prediction | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | 大氣輻射<br>Atmospheric Radiation                              | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|          |                                                                         |   |   |   |   |   |   |   |   |   |  |
|----------|-------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|--|
|          | 雷達氣象特論<br>Specific Topics on Radar Meteorology                          | 3 |   |   | 3 | 3 |   |   |   |   |  |
|          | 高等海洋物理學<br>Advanced Physical Oceanography                               | 3 |   |   | 3 | 3 |   |   |   |   |  |
|          | 高等衛星微波降水反演<br>Advanced Satellite Microwave Rainfall Retrievals          | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 高等雲物理<br>Advanced Cloud Physics                                         | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 軍事氣象學特論<br>Special Topics on Military Meteorology                       | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 動力氣候學<br>Dynamic Climatology                                            | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 邊界層氣象學特論<br>Special Topics on Boundary Layer Meteorology                | 3 |   |   |   |   |   |   | 3 | 3 |  |
| 空間科學族群選修 | 統計平差特論<br>Special Topics on Survey Adjustment                           | 3 | 3 | 3 |   |   |   |   |   |   |  |
|          | 全球導航衛星系統特論<br>Special Topics on GNSS                                    | 3 | 3 | 3 |   |   |   |   |   |   |  |
|          | 地理資訊系統特論<br>Special Topics on GIS                                       | 3 | 3 | 3 |   |   |   |   |   |   |  |
|          | 遙感探測特論<br>Special Topics on Remote Sensing                              | 3 | 3 | 3 |   |   |   |   |   |   |  |
|          | 海道測量學特論<br>Special Topics on Hydrography                                | 3 | 3 | 3 |   |   |   |   |   |   |  |
|          | 大地測量學特論<br>Special Topics on Geodesy                                    | 3 |   |   | 3 | 3 |   |   |   |   |  |
|          | 整合式地理資訊系統特論<br>Special Topics on Integrated GIS                         | 3 |   |   | 3 | 3 |   |   |   |   |  |
|          | 彩色複製特論<br>Special Topics on Color Reproduction                          | 3 |   |   | 3 | 3 |   |   |   |   |  |
|          | 數值攝影測量特論<br>Special Topics on Digital Photogrammetry                    | 3 |   |   | 3 | 3 |   |   |   |   |  |
|          | 物理大地測量學特論<br>Special Topics on Physical Geodesy                         | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 導航定位學特論<br>Special Topics on Navigation and Positioning                 | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 數值地形特論<br>Special Topics on DTM                                         | 3 |   |   |   |   | 3 | 3 |   |   |  |
|          | 變形測量學特論<br>Special Topics on Theory and Practice of Deformation Surveys | 3 |   |   |   |   |   |   | 3 | 3 |  |
|          | 印刷傳播特論<br>Special Topics on Printing Communication                      | 3 |   |   |   |   |   |   | 3 | 3 |  |
|          | 地球形狀學特論<br>Special Topics on Earth Shape                                | 3 |   |   |   |   |   |   | 3 | 3 |  |

空間科學族群選修

1. 本族群課程之核心課程包含有：統計平差特論、全球導航衛星系統特論、大地測量學特論、地理資訊系統特論、遙感探測特論、數值攝影測量特論等 6 門課程。
2. 研究生須於核心課程之中至少選修 2 門。

|             |                                                                              |    |   |   |   |   |   |   |   |                                                                                                                |   |
|-------------|------------------------------------------------------------------------------|----|---|---|---|---|---|---|---|----------------------------------------------------------------------------------------------------------------|---|
| 軍事工程族群選修    | 高等鋼筋混凝土學<br>Advanced Reinforced Concrete                                     | 3  | 3 | 3 |   |   |   |   |   | 軍事工程族群選修<br>1.本族群課程之核心課程包含有：高等鋼筋混凝土學、高等環境控制、營建工程專案管理特論、防災工程特論、大地工程特論、耐震設計與評估等 6 門課程。<br>2.研究生須於核心課程之中至少選修 2 門。 |   |
|             | 彈性力學<br>Elasticity theory                                                    | 3  | 3 | 3 |   |   |   |   |   |                                                                                                                |   |
|             | 高等環境控制<br>Advanced Environmemtal Control                                     | 3  | 3 | 3 |   |   |   |   |   |                                                                                                                |   |
|             | 營建工程專案管理特論<br>Special Topics on Construction Project Management              | 3  | 3 | 3 |   |   |   |   |   |                                                                                                                |   |
|             | 地震工程學<br>Earthquake Engineering                                              | 3  |   |   | 3 | 3 |   |   |   |                                                                                                                |   |
|             | 防災工程特論<br>Special Topics on Disaster Prevention Engineering                  | 3  |   |   | 3 | 3 |   |   |   |                                                                                                                |   |
|             | 大地工程特論<br>Special Topics on Geotechnical Engineering                         | 3  |   |   | 3 | 3 |   |   |   |                                                                                                                |   |
|             | 數位影像處理<br>Digital Image Processing                                           | 3  |   |   | 3 | 3 |   |   |   |                                                                                                                |   |
|             | 耐震設計與評估<br>Design and Assesment of Engineering of Resists Earthquake         | 3  |   |   |   |   | 3 | 3 |   |                                                                                                                |   |
|             | 軍事防爆震工程特論<br>Special Topics on Protective Engineering                        | 3  |   |   |   |   | 3 | 3 |   |                                                                                                                |   |
|             | 工程量測及監測<br>Engineering Examining and Monitoring                              | 3  |   |   |   |   | 3 | 3 |   |                                                                                                                |   |
|             | 論文寫作與表達<br>Writing of Thesis and Expressing                                  | 3  |   |   |   |   | 3 | 3 |   |                                                                                                                |   |
|             | 工程材料組成律<br>Constitutive Law for Engineering Material                         | 3  |   |   |   |   |   |   | 3 |                                                                                                                | 3 |
|             | 航遙測在大地工程之應用<br>The Application of Remote Sensing on Geotechnical Engineering | 3  |   |   |   |   |   |   | 3 |                                                                                                                | 3 |
|             | 決策理論與方法<br>Decision theory and Method                                        | 3  |   |   |   |   |   |   | 3 |                                                                                                                | 3 |
| 選 修 學 分 小 計 |                                                                              | 18 | 3 | 3 | 6 | 6 | 3 | 3 | 3 | 3                                                                                                              |   |
| 學 分 合 計     |                                                                              | 35 | 6 | 6 | 6 | 6 | 3 | 3 | 6 | 6                                                                                                              |   |

國防大學理工學院國防科學研究所博士班  
114 年班（第 41 期）電機電子工程組科目學分時數配當表

| 區分        | 科目名稱                                           | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                                                                                                                                                                                                                                                                                                                                                       |       |
|-----------|------------------------------------------------|------|--------|----|----|----|--------|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|           |                                                |      | 上      |    | 下  |    | 上      |    | 下  |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           |                                                |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                                                                                                                                                                                                                                                                                                                                                          |       |
| 組必修       | 論文<br>Thesis                                   | 12   |        | 1  |    | 1  |        | 1  |    | 1  | 1. 最低畢業學分為 35 學分。<br>2. 論文須俟學位口試通過後始賦予 12 學分（第 1 至 4 學期每週 1 小時，第 5 學期起每週 2 小時）。<br>3. 專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分（提前畢業者，核算至學位口試之前 1 學期）。<br>4. 除本組選修課程外，研究生得依需要經指導教授、組長及所長同意後選修本所其它各組跨領域相關課程（成績及所獲學分登錄於成績單中，其中 1 門（3 學分）得列計為最低畢業學分）<br>5. 重複選修本院碩士班已選修之課程，不列計為最低畢業學分。<br>6. 跨校選修依本校學則辦理。<br>7. 選修開課學期得視需要調整。 |       |
|           | 專題討論<br>Seminar                                | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 軍事科技研究<br>Study in Military Technology         | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
| 必修學分小計    |                                                | 17   | 0      | 3  | 3  | 6  | 0      | 3  | 0  | 3  |                                                                                                                                                                                                                                                                                                                                                          |       |
| 組選修       | 數理統計<br>Mathematical Statistics                | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          | 組共同選修 |
|           | 數值方法<br>Numerical Method                       | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 隨機過程特論<br>Special Topics on Random Process     | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 高等計算機結構<br>Advanced Computer Architecture      | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 高等計算機網路<br>Advanced Computer Networks          | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 演算法<br>Algorithms                              | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 電子戰<br>Electronic Warfare                      | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 高等程式設計<br>Advanced Program Design              | 3    |        |    |    |    | 3      | 3  |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
| 通訊與電波族群選修 | 多媒體通訊<br>Multimedia Communications             | 3    | 3      | 3  |    |    |        |    |    |    | 通訊與電波族群選修<br>1. 本族群核心課程包含有：高等數位訊號處理、高等通訊理論、隨機過程特論、高等訊源編碼、高等影像壓縮編碼、衛星通訊、展頻通訊、電磁波理論、高等天線工程、及高等微波工程等 10 門課程。<br>2. 研究生須於核心課程之中至少選修 3 門，跨族群課程至少選修 1 門。                                                                                                                                                                                                       |       |
|           | 高等數位訊號處理<br>Advanced Digital Signal Processing | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 適應性訊號處理<br>Adaptive Signal Processing          | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 高等通訊理論<br>Advanced Communication Theory        | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |
|           | 錯誤控制編碼<br>Error Control Coding                 | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                          |       |

|                                                           |   |   |   |   |   |   |   |   |   |
|-----------------------------------------------------------|---|---|---|---|---|---|---|---|---|
| 雷達訊號處理<br>Radar Signal Processing                         | 3 | 3 | 3 |   |   |   |   |   |   |
| 數位通訊訊號處理<br>Digital Communication<br>Signal Processing    | 3 |   |   | 3 | 3 |   |   |   |   |
| 陣列訊號處理<br>Array Signal Processing                         | 3 |   |   | 3 | 3 |   |   |   |   |
| 無線通訊<br>Wireless Communications                           | 3 |   |   | 3 | 3 |   |   |   |   |
| 統計通訊<br>Statistical Communication                         | 3 |   |   | 3 | 3 |   |   |   |   |
| 訊息理論<br>Information Theory                                | 3 |   |   | 3 | 3 |   |   |   |   |
| 高等影像壓縮編碼<br>Advanced Image Compression                    | 3 |   |   | 3 | 3 |   |   |   |   |
| 高等訊源編碼<br>Advanced Source Coding                          | 3 |   |   | 3 | 3 |   |   |   |   |
| 排隊理論<br>Queueing Theory                                   | 3 |   |   | 3 | 3 |   |   |   |   |
| 電腦通訊網路<br>Computer Communications                         | 3 |   |   | 3 | 3 |   |   |   |   |
| 雷達系統工程<br>Radar System Engineering                        | 3 |   |   | 3 | 3 |   |   |   |   |
| 語音訊號處理<br>Speech Signal Processing                        | 3 |   |   |   |   | 3 | 3 |   |   |
| 小波理論<br>Wavelet Transform                                 | 3 |   |   |   |   | 3 | 3 |   |   |
| 行動通訊<br>Mobile Communications                             | 3 |   |   |   |   | 3 | 3 |   |   |
| 衛星通訊<br>Satellite Communications                          | 3 |   |   |   |   | 3 | 3 |   |   |
| 展頻通訊<br>Spread Spectrum Communications                    | 3 |   |   |   |   | 3 | 3 |   |   |
| 保密通訊<br>Secure Communications                             | 3 |   |   |   |   | 3 | 3 |   |   |
| 編碼理論<br>Coding Theory                                     | 3 |   |   |   |   | 3 | 3 |   |   |
| 訊號處理專題特論<br>Special Topics on Signal<br>Processing        | 3 |   |   |   |   |   |   | 3 | 3 |
| 通訊專題特論<br>Special Topics on<br>Communications             | 3 |   |   |   |   |   |   | 3 | 3 |
| 衛星通訊專題特論<br>Special Topics on Satellite<br>Communications | 3 |   |   |   |   |   |   | 3 | 3 |
| 編碼專題特論<br>Special Topics on Coding Theory                 | 3 |   |   |   |   |   |   | 3 | 3 |
| 編碼理論應用<br>Application of Coding Theory                    | 3 |   |   |   |   |   |   | 3 | 3 |
| 電磁波理論<br>Electromagnetic Wave Theory                      | 3 | 3 | 3 |   |   |   |   |   |   |
| 高等微波工程<br>Advanced Advanced<br>Microwave Engineering      | 3 | 3 | 3 |   |   |   |   |   |   |

|           |                                                                         |   |   |   |   |   |   |   |   |   |
|-----------|-------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|
|           | 高等天線工程<br>Advanced Antenna Engineering                                  | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 電磁波傳播<br>Electromagnetic Propagation                                    | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 微波電路設計<br>Microwave Circuit Designs                                     | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 微波匿蹤應用技術<br>Stealth Technologies                                        | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 天線設計與分析<br>Antenna Design and Analysis                                  | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 雷達截面積分析與設計<br>Radar-Cross-Section Analysis and Design                   | 3 |   |   |   |   | 3 | 3 |   |   |
|           | 平面式衛星與行動通訊天線<br>Planar Antennas for Satellite and Mobile Communications | 3 |   |   |   |   | 3 | 3 |   |   |
|           | 天線設計特論<br>Special Topics on Antenna Designs                             | 3 |   |   |   |   |   |   | 3 | 3 |
| 控制自動化族群選修 | 類神經網路特論<br>Special Topics on Neural Networks                            | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 超大型積體電路設計特論<br>Special Topics on VLSI Design                            | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 數位訊號處理器應用<br>Applications of Digital Signal Processors                  | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 計算機數學<br>Computer Mathematics                                           | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 嵌入式微處理機系統<br>Embedded Microprocessors                                   | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 資訊安全特論<br>Special Topics on Information Security                        | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 進階計算機輔助電路設計<br>Advanced Computer Aided Circuit Design                   | 3 | 3 | 3 |   |   |   |   |   |   |
|           | 模糊理論與應用特論<br>Special Topics in Fuzzy Theory and Applications            | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 生物資訊特論<br>Special Topics on Bioinformatics                              | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 分散式資料庫特論<br>Special Topics on Distributed Database                      | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 分散式系統特論<br>Special Topics on Distributed Systems                        | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 數位影像處理<br>Digital Image Processing                                      | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 分散式模擬特論<br>Special Topics on Distributed Simulation                     | 3 |   |   | 3 | 3 |   |   |   |   |
|           | 嵌入式作業系統應用<br>Embedded Operating System Applications                     | 3 |   |   | 3 | 3 |   |   |   |   |

控制自動化族群選修

1. 本族群核心課程包含有：演算法、高等計算機結構、高等計算機網路、資訊安全特論、高等數位控制及高等電子自動化課程等 6 門課程。

2. 研究生須於核心課程之中至少選修 2 門，跨族群課程至少選修 1 門。

|                                                                        |   |   |   |   |   |   |   |   |   |
|------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|
| 密碼學特論<br>Special Topics on Cryptography                                | 3 |   |   | 3 | 3 |   |   |   |   |
| 多媒體安全<br>Multimedia Security                                           | 3 |   |   | 3 | 3 |   |   |   |   |
| 作業系統特論<br>Special Topics on<br>Operating Systems                       | 3 |   |   | 3 | 3 |   |   |   |   |
| Linux 作業系統<br>Linux Operating System                                   | 3 |   |   | 3 | 3 |   |   |   |   |
| 網路程式設計<br>Network Program Design                                       | 3 |   |   | 3 | 3 |   |   |   |   |
| 系統分析與設計<br>System Analysis and Design                                  | 3 |   |   | 3 | 3 |   |   |   |   |
| 基因演算法特論<br>Special Topics on Genetic<br>Algorithms                     | 3 |   |   |   |   | 3 | 3 |   |   |
| 平行編譯器特論<br>Special Topics on Parallel<br>Compiler                      | 3 |   |   |   |   | 3 | 3 |   |   |
| 平行處理特論<br>Special Topics on Parallel<br>Processing                     | 3 |   |   |   |   | 3 | 3 |   |   |
| 衛星遙測影像處理<br>Remote Sensing Image<br>Processing                         | 3 |   |   |   |   | 3 | 3 |   |   |
| 軟體工程特論<br>Special Topics on<br>Software Engineering                    | 3 |   |   |   |   | 3 | 3 |   |   |
| 物件導向技術特論<br>Special Topics on Object Oriented<br>Programming Technique | 3 |   |   |   |   | 3 | 3 |   |   |
| 生物認證<br>Biometric Identification                                       | 3 |   |   |   |   |   |   | 3 | 3 |
| 圖形識別<br>Pattern Recognition                                            | 3 |   |   |   |   |   |   | 3 | 3 |
| 即時計算機特論<br>Special Topics on<br>Real-Time Computer                     | 3 |   |   |   |   |   |   | 3 | 3 |
| 資訊隱藏<br>Information Hiding                                             | 3 |   |   |   |   |   |   | 3 | 3 |
| 高等電力電子學<br>Advanced Power Electronics                                  | 3 | 3 | 3 |   |   |   |   |   |   |
| 線性系統<br>Linear System Theory                                           | 3 | 3 | 3 |   |   |   |   |   |   |
| 近代控制特論<br>Special Topics on Modern<br>Control                          | 3 | 3 | 3 |   |   |   |   |   |   |
| 控制系統理論<br>Control System Theory                                        | 3 | 3 | 3 |   |   |   |   |   |   |
| 高等數位控制<br>Advanced Digital Control System                              | 3 | 3 | 3 |   |   |   |   |   |   |
| 高等電子自動化<br>Advanced E-Automation                                       | 3 | 3 | 3 |   |   |   |   |   |   |
| Petri nets 理論與應用<br>Theory and Application of<br>Petri nets            | 3 | 3 | 3 |   |   |   |   |   |   |

|            |                                                                            |   |   |   |   |   |   |   |  |                                                                                                                 |
|------------|----------------------------------------------------------------------------|---|---|---|---|---|---|---|--|-----------------------------------------------------------------------------------------------------------------|
|            | 射頻辨識系統設計<br>Design of RFID Systems                                         | 3 | 3 | 3 |   |   |   |   |  |                                                                                                                 |
|            | 智慧型控制分析與設計<br>Analysis and Design of Intelligent Control                   | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 最佳控制<br>Optimal Control                                                    | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 強健控制理論<br>Robust Control Theory                                            | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 高等模糊理論<br>Advanced Fuzzy Theory                                            | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 適應控制<br>Adaptive Control                                                   | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 高等 DSP 程式設計<br>Advanced DSP Programming                                    | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 電子自動化專題<br>Special Topics on E-Automation                                  | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 物件導向分析與設計<br>Object-Oriented Analysis and Design                           | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 互動系統<br>Reactive Systems                                                   | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 高等交流電機控制<br>Advanced AC Machine Control                                    | 3 |   |   |   |   | 3 | 3 |  |                                                                                                                 |
|            | 導引與控制<br>Guidance and Control                                              | 3 |   |   |   |   | 3 | 3 |  |                                                                                                                 |
|            | 非線性控制特論<br>Special Topics on Nonlinear Control                             | 3 |   |   |   |   | 3 | 3 |  |                                                                                                                 |
| 光電與半導體族群選修 | 高等光電子學<br>Advanced Optoelectronics                                         | 3 | 3 | 3 |   |   |   |   |  | 光電與半導體族群選修<br>1. 本族群課程之核心課程包含有：高等光電子學、高等近代光學、高等半導體元件物理及高等微電子技術等 4 門課程。<br>2. 研究生須於核心課程之中至少選修 2 門，跨族群課程至少選修 1 門。 |
|            | 高等近代光學<br>Advanced Modern Optics                                           | 3 | 3 | 3 |   |   |   |   |  |                                                                                                                 |
|            | 高等光電工程<br>Advanced Optoelectronic Engineering                              | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 高等半導體光學<br>Advanced Semiconductor Optics                                   | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 光電材料設計<br>Design of Optoelectronics Materials                              | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 光學薄膜設計<br>Design of Optical Thin Film                                      | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 光譜學<br>Spectroscopy                                                        | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 光纖通訊原理、技術及應用<br>Principles and Applications of Optical Fiber Communication | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 理論光學<br>Principles of Optics                                               | 3 |   |   | 3 | 3 |   |   |  |                                                                                                                 |
|            | 紅外線工程<br>Infrared Engineering                                              | 3 |   |   |   |   | 3 | 3 |  |                                                                                                                 |
|            | 雷射原理、技術及工程應用<br>Principle, Technology and Engineering Application of Laser | 3 |   |   |   |   | 3 | 3 |  |                                                                                                                 |

|                                                                    |   |   |   |   |   |   |   |   |   |
|--------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|
| 幾何光學設計<br>Geometrical Optics Design                                | 3 |   |   |   |   | 3 | 3 |   |   |
| 精密光學量測<br>Advanced Optical Measurement                             | 3 |   |   |   |   | 3 | 3 |   |   |
| 平面顯示器原理及應用<br>Principles and Applications<br>of Flat Panel Display | 3 |   |   |   |   |   |   | 3 | 3 |
| 奈米光學<br>Nano-Optics                                                | 3 |   |   |   |   |   |   | 3 | 3 |
| 非線性光學特論<br>Special Topics on<br>Nonlinear Optics                   | 3 |   |   |   |   |   |   | 3 | 3 |
| 量子光學訊號處理<br>Quantum Optical<br>Information Processing              | 3 |   |   |   |   |   |   | 3 | 3 |
| 高等半導體元件物理<br>Advanced Semiconductor<br>Devices Physics             | 3 | 3 | 3 |   |   |   |   |   |   |
| 高等固態物理<br>Advanced Solid State Physics                             | 3 | 3 | 3 |   |   |   |   |   |   |
| 金氧半製程技術<br>MOS Processing Technology                               | 3 | 3 | 3 |   |   |   |   |   |   |
| 電子材料分析<br>Analysis for Electronic<br>Materials                     | 3 | 3 | 3 |   |   |   |   |   |   |
| 高等微電子技術<br>Advanced Microelectronic<br>Technology                  | 3 | 3 | 3 |   |   |   |   |   |   |
| 高等固態電子元件<br>Advanced Solid-state<br>Electronic Devices             | 3 |   |   | 3 | 3 |   |   |   |   |
| 半導體元件量測<br>Measurement of<br>Semiconductor Devices                 | 3 |   |   | 3 | 3 |   |   |   |   |
| 高等量子力學<br>Advanced Quantum<br>Mechanics                            | 3 |   |   | 3 | 3 |   |   |   |   |
| 進階積體電路製程整合<br>Advanced IC Process<br>Integration                   | 3 |   |   | 3 | 3 |   |   |   |   |
| 化合物半導體技術<br>Compound Semiconductor<br>Technology                   | 3 |   |   | 3 | 3 |   |   |   |   |
| 近代電子構裝技術<br>Modern Electronic<br>Packaging Technology              | 3 |   |   | 3 | 3 |   |   |   |   |
| 奈米物理及奈米技術<br>Nanophysics and<br>Nanotechnology                     | 3 |   |   |   |   | 3 | 3 |   |   |
| 高階微波積體電路<br>Advanced Microwave IC                                  | 3 |   |   |   |   | 3 | 3 |   |   |
| 磊晶工程<br>Epitaxy Engineering                                        | 3 |   |   |   |   | 3 | 3 |   |   |

|                                                               |    |  |  |  |  |   |   |   |   |  |
|---------------------------------------------------------------|----|--|--|--|--|---|---|---|---|--|
| 近代記憶體技術<br>Modern Memories Technology                         | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 光電元件<br>Optoelectronics Devices                               | 3  |  |  |  |  | 3 | 3 |   |   |  |
| 高階感測元件設計與分析<br>Advanced Sensor Devices<br>Design and Analysis | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 半導體微波元件<br>Semiconductor Microwave<br>Devices                 | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 沉積及薄膜技術<br>Deposition and Thin Film<br>Technology             | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 雷射半導體設計<br>Semiconductor Laser<br>Designs                     | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 半導體元件分析<br>Analysis for<br>Semiconductor Devices              | 3  |  |  |  |  |   |   | 3 | 3 |  |
| 選修學分小計                                                        | 18 |  |  |  |  |   |   |   |   |  |
| 學分合計                                                          | 35 |  |  |  |  |   |   |   |   |  |

國防大學理工學院國防科學研究所（博士班）  
114 年班（第 41 期）動力及系統工程組科目學分時數配當表

| 區分     | 科目名稱                                                           | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------|----------------------------------------------------------------|------|--------|----|----|----|--------|----|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        |                                                                |      | 上      |    | 下  |    | 上      |    | 下  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        |                                                                |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 組必修    | 論文<br>Thesis                                                   | 12   |        | 1  |    | 1  |        | 1  |    | 1  | 1.最低畢業學分為 35 學分。<br>2.論文須俟學位口試通過後始賦予 12 學分（第 1 至 4 學期每週 1 小時，第 5 學期起每週 2 小時）。<br>3.專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分（提前畢業者，核算至學位口試之前 1 學期）。<br>4.本組核心課程為：高等後勤工程、武器系統表面工程、金屬潛變學、高等系統工程、貫穿力學、計算流體與軍用載具構型設計、載具先進動力系統、高等地面載具運動力學、高等船艦運動力學、高等有限元素分析、高等可靠度工程、火箭工程、結構最佳化設計、壽期成本及效益分析等 14 門課程，研究生須於本組核心課程至少選修 1 門（3 學分）。<br>5.除本組選修課程外，研究生得依需要經指導教授、組長及所長同意後選修本所其它各組跨領域相關課程（成績及所獲學分登錄於成績單中，其中 1 門（3 學分）得列計為最低畢業學分）。<br>6.本組研究生得依需要經指導教授、組長及所長同意後選修本院動力及系統工程學系兵器系統工程、車輛及運輸工程、造船及海洋工程 3 個碩士班之教育計畫所列課程，（成績及所獲學分登錄於成績單中，其中 2 門（6 學分）得列計為最低畢業學分）。<br>7.重複選修本院碩士班已選修之課程，不列計為最低畢業學分。<br>8.跨校選修依本校學則辦理。<br>9.選修開課學期得視需要調整。 |
|        | 專題討論<br>Seminar                                                | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 兵器系統效益評估<br>Weapon System Effectiveness                        | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 軍事科技研究<br>Study in Military Technology                         | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 必修學分小計 |                                                                | 20   | 3      | 6  | 3  | 6  | 0      | 3  | 0  | 3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 組選修    | 高等後勤工程<br>Advanced Logistics Engineering                       | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 高等熱傳學<br>Advanced Heat Transfer                                | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 人工智慧<br>Artificial Intelligence                                | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 強健控制理論<br>Robust Control Theory                                | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 流體與結構耦合作用<br>Coupling Effects for Fluid and Structures         | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 武器系統表面工程<br>Surface Engineering of Weapon Systems              | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 連體力學<br>Continuum Mechanics                                    | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 金屬潛變學<br>Creep Theory of Alloys                                | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 複合材料力學特論<br>Special Topics on Mechanics of Composite Materials | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 高等系統工程<br>Advanced Systems Engineering                         | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 高等振動學<br>Advanced Theory of Vibration                          | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 貫穿力學<br>Penetration Mechanics                                  | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 風洞試驗方法<br>Wind Tunnel Testing                                  | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|        | 計算流體與軍用載具構型設計<br>CFD and Military Vehicle Configuration Design | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                                                                       |    |   |   |   |    |   |   |   |   |  |
|-------------------------------------------------------------------------------------------------------|----|---|---|---|----|---|---|---|---|--|
| 載具先進動力系統<br>Advanced Power Systems<br>of Vehicle                                                      | 3  |   |   | 3 | 3  |   |   |   |   |  |
| 熱系統設計<br>Design of Thermal Systems                                                                    | 3  |   |   | 3 | 3  |   |   |   |   |  |
| 高等有限元素分析<br>Advanced Finite Element<br>Analysis                                                       | 3  |   |   | 3 | 3  |   |   |   |   |  |
| 光學及電子顯微鏡分<br>析技術與應用實務<br>Analysis Techniques and<br>Application of Optical and<br>Electron Microscope | 3  |   |   | 3 | 3  |   |   |   |   |  |
| 軍艦設計特論<br>Special Topics on Naval<br>Ship Design                                                      | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 高等地面載具運動力學<br>Advanced Road Vehicle<br>Dynamics                                                       | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 高等船艦運動力學<br>Advanced Dynamics of<br>Marine Vehicle                                                    | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 高等可靠度工程<br>Advanced Reliability<br>Engineering                                                        | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 氣動力特論<br>Special Topics on Gas<br>Dynamics                                                            | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 火箭工程<br>Rockets Engineering                                                                           | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 結構最佳化設計<br>Optimal Design of<br>Structure                                                             | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 混沌與非線性理論<br>Chaos and Nonlinear<br>Theory                                                             | 3  |   |   |   |    | 3 | 3 |   |   |  |
| 壽期成本及效益分析<br>Life Cost and Efficiency<br>Analysis                                                     | 3  |   |   |   |    |   |   | 3 | 3 |  |
| 紊流理論<br>Turbulent Flow Theory                                                                         | 3  |   |   |   |    |   |   | 3 | 3 |  |
| 飛彈設計特論<br>Special Topics on Missile<br>Design                                                         | 3  |   |   |   |    |   |   | 3 | 3 |  |
| 動力系統專題特論<br>Special Topics on Power<br>Vehicle and Systems<br>Engineering                             | 3  |   |   |   |    |   |   | 3 | 3 |  |
| 選 修 學 分 小 計                                                                                           | 15 | 3 | 3 | 6 | 6  | 3 | 3 | 3 | 3 |  |
| 學 分 合 計                                                                                               | 35 | 6 | 9 | 9 | 12 | 3 | 6 | 3 | 6 |  |

國防大學理工學院國防科學研究所（博士班）  
114 年班（第 41 期）機械及航太工程組科目學分時數配當表

| 區分     | 科目名稱                                                | 規定學分 | 第 1 學年 |    |    |    | 第 2 學年 |    |    |    | 備考                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------|-----------------------------------------------------|------|--------|----|----|----|--------|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        |                                                     |      | 上      |    | 下  |    | 上      |    | 下  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        |                                                     |      | 學分     | 時數 | 學分 | 時數 | 學分     | 時數 | 學分 | 時數 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 組必修    | 論文<br>Thesis                                        | 12   |        | 1  |    | 1  |        | 1  |    | 1  | 1. 最低畢業學分為 35 學分。<br>2. 論文須俟學位口試通過後始賦予 12 學分（第 1 至 4 學期每週 1 小時，第 5 學期起每週 2 小時）。<br>3. 專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分（提前畢業者，核算至學位口試之前 1 學期）。<br>4. 本組核心課程為：機電整合特論、線性系統特論、熱傳學特論、流體力學特論、熱力學特論、高等有限元素法、高等彈性力學、數學方法、工程設計特論、噴射推進特論及高等系統識別等 11 門課程，研究生須於本組核心課程之中至少選修 3 門。<br>5. 除本組選修課程外，研究生得依需要經指導教授、組長及所長同意後選修本所其它各組跨領域相關課程（成績及所獲學分登錄於成績單中，其中 1 門（3 學分）得列計為最低畢業學分）。<br>6. 本組研究生得依需要經指導教授、組長及所長同意後選修本院機械工程及航空太空工程等 2 個碩士班之教育計畫所列課程，（成績及所獲學分登錄於成績單中，其中 2 門（6 學分）得列計為最低畢業學分）。<br>7. 重複選修本院碩士班已選修之課程，不列計為最低畢業學分。<br>8. 跨校選修依本校學則辦理。<br>9. 選修開課學期得視需要調整。 |
|        | 專題討論<br>Seminar                                     | 2    |        | 2  |    | 2  |        | 2  |    | 2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 軍事科技研究<br>Study in Military Technology              | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 必修學分小計 |                                                     | 17   | 0      | 3  | 3  | 6  | 0      | 3  | 0  | 3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 組選修    | 數學方法<br>Mathematical Methods                        | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 高等系統識別<br>Advanced System Identification            | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 機電整合特論<br>Special Topics on Mechatronics            | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 線性系統特論<br>Special Topics on Linear Systems Theory   | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 人工智慧特論<br>Special Topics on Artificial Intelligence | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 非線性系統理論<br>Nonlinear System Theory                  | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 系統模擬<br>System Simulation                           | 3    |        |    |    |    | 3      | 3  |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 導引與控制特論<br>Special Topics on Guidance and Control   | 3    |        |    |    |    | 3      | 3  |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 非線性控制特論<br>Special Topics on Nonlinear Control      | 3    |        |    |    |    |        |    | 3  | 3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 流體力學特論<br>Special Topics on Fluid Dynamics          | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 熱力學特論<br>Special Topics on Thermodynamics           | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 熱傳學特論<br>Special Topics on Heat Transfer            | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 噴射推進特論<br>Special Topics on Jet Propulsion          | 3    | 3      | 3  |    |    |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|        | 高等計算流體力學<br>Advanced Computational Fluid Dynamics   | 3    |        |    | 3  | 3  |        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                                                     |    |   |   |   |   |   |   |   |   |  |
|---------------------------------------------------------------------|----|---|---|---|---|---|---|---|---|--|
| 熱流實驗設計與分析<br>Design and Analysis of<br>Thermal-fluid<br>Experiments | 3  |   |   | 3 | 3 |   |   |   |   |  |
| 能源工程特論<br>Special Topics on Energy<br>Engineering                   | 3  |   |   | 3 | 3 |   |   |   |   |  |
| 氣渦輪機特論<br>Special Topics on Gas<br>Turbine Engine                   | 3  |   |   | 3 | 3 |   |   |   |   |  |
| 彈體氣動力設計<br>Projectile Aerodynamic<br>Design                         | 3  |   |   |   |   | 3 | 3 |   |   |  |
| 工程設計特論<br>Special Topics on<br>Engineering Design                   | 3  | 3 | 3 |   |   |   |   |   |   |  |
| 高等有限元素法<br>Advanced Finite Element<br>Method                        | 3  | 3 | 3 |   |   |   |   |   |   |  |
| 高等彈性力學<br>Advanced Topics on<br>Elasticity                          | 3  | 3 | 3 |   |   |   |   |   |   |  |
| 高等製造分析<br>Advanced Manufacturing<br>Analysis                        | 3  |   |   | 3 | 3 |   |   |   |   |  |
| 波動力學<br>Wave Mechanics                                              | 3  |   |   | 3 | 3 |   |   |   |   |  |
| 固體力學<br>Solid Mechanics                                             | 3  |   |   | 3 | 3 |   |   |   |   |  |
| 最佳化理論<br>Optimization Theory                                        | 3  |   |   |   |   | 3 | 3 |   |   |  |
| 連體力學<br>Continuum Mechanics                                         | 3  |   |   |   |   | 3 | 3 |   |   |  |
| 選 修 學 分 小 計                                                         | 18 | 3 | 3 | 6 | 6 | 3 | 3 | 3 | 3 |  |
| 學 分 合 計                                                             | 35 | 6 | 6 | 6 | 6 | 3 | 3 | 6 | 6 |  |

國防大學理工學院國防科學研究所資訊工程組課程編碼及中英文名稱對照表

| 課目名稱                                                                     | 學分 | 科目編碼      | 英文名稱                            |
|--------------------------------------------------------------------------|----|-----------|---------------------------------|
| 必修                                                                       |    |           |                                 |
| 論文(1)                                                                    | 0  | EI1320A01 | Thesis(1)                       |
| 論文(2)                                                                    | 0  | EI1320A02 | Thesis(2)                       |
| 論文(3)                                                                    | 0  | EI1320A03 | Thesis(3)                       |
| 論文(4)                                                                    | 0  | EI1320A04 | Thesis(4)                       |
| 論文(5)                                                                    | 0  | EI1320A05 | Thesis(5)                       |
| 論文(6)                                                                    | 0  | EI1320A06 | Thesis(6)                       |
| 論文(7)                                                                    | 0  | EI1320A07 | Thesis(7)                       |
| 論文(8)                                                                    | 0  | EI1320A08 | Thesis(8)                       |
| 論文(9)                                                                    | 0  | EI1320A09 | Thesis(9)                       |
| 論文(10)                                                                   | 0  | EI1320A10 | Thesis(10)                      |
| 論文(11)                                                                   | 0  | EI1320A11 | Thesis(11)                      |
| 論文(12)                                                                   | 0  | EI1320A12 | Thesis(12)                      |
| 論文(13)                                                                   | 0  | EI1320A13 | Thesis(13)                      |
| 論文(14)                                                                   | 0  | EI1320A14 | Thesis(14)                      |
| 論文(15)                                                                   | 0  | EI1320A15 | Thesis(15)                      |
| 論文(16)                                                                   | 0  | EI1320A16 | Thesis(16)                      |
| ※論文須俟學位口試通過後始賦予 12 學分                                                    |    |           |                                 |
| 專題討論(1)                                                                  | 0  | EI1320A17 | Seminar (1)                     |
| 專題討論(2)                                                                  | 0  | EI1320A18 | Seminar (2)                     |
| 專題討論(3)                                                                  | 0  | EI1320A19 | Seminar (3)                     |
| 專題討論(4)                                                                  | 0  | EI1320A20 | Seminar (4)                     |
| 專題討論(5)                                                                  | 0  | EI1320A21 | Seminar (5)                     |
| 專題討論(6)                                                                  | 0  | EI1320A22 | Seminar (6)                     |
| 專題討論(7)                                                                  | 0  | EI1320A23 | Seminar (7)                     |
| 專題討論(8)                                                                  | 2  | EI1322A24 | Seminar (8)                     |
| ※專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分 |    |           |                                 |
| 軍事科技研究                                                                   | 3  | EI0113A01 | Study in Military Technology    |
| 選修                                                                       |    |           |                                 |
| 計算機結構                                                                    | 3  | EI1323B01 | Computer Architecture           |
| 計算機網路                                                                    | 3  | EI1323B02 | Computer Networks               |
| 資料庫系統                                                                    | 3  | EI1323B03 | Database Systems                |
| 演算法                                                                      | 3  | EI1323B04 | Algorithms                      |
| 軟體工程                                                                     | 3  | EI1323B05 | Software Engineering            |
| 計算機數學                                                                    | 3  | EI1323B06 | Computation Mathematics         |
| 先進資訊科技                                                                   | 3  | EI1323B08 | Advanced Information Technology |
| 隨機過程                                                                     | 3  | EI1323B09 | Stochastic Process              |
| 高等應用數學                                                                   | 3  | EI1323B10 | Advanced Applied Mathematics    |
| 人工智慧                                                                     | 3  | EI1323B11 | Artificial Intelligence         |

國防大學理工學院國防科學研究所資訊工程組課程編碼及中英文名稱對照表

| 課目名稱          | 學分 | 科目編碼      | 英文名稱                                                  |
|---------------|----|-----------|-------------------------------------------------------|
| 系統設計分析        | 3  | EI1323B12 | Systems Design and Analysis Methods                   |
| 高等人工智慧        | 3  | EI1323B13 | Advanced Artificial Intelligence                      |
| 系統設計分析特論      | 3  | EI1323B14 | Special Topics on Systems Design and Analysis Methods |
| 作業系統          | 3  | EI1323B15 | Operating Systems                                     |
| 高等 C4ISR 架構設計 | 3  | EI1323C02 | Advanced Architectural Design of C4ISR                |
| 高等計算機模擬       | 3  | EI1323C03 | Advanced Computer Simulation                          |
| 高等物件導向分析與設計   | 3  | EI1323C04 | Advanced Object-Oriented System Analysis and Design   |
| 分散式模擬特論       | 3  | EI1323C05 | Special Topics on Distributed Simulation              |
| 作業研究特論        | 3  | EI1323C06 | Special Topics on Operations Research                 |
| 高等共通作業環境      | 3  | EI1323C08 | Advanced Common Operational Environment               |
| 系統工程與管理特論     | 3  | EI1323C10 | Special Topics on Systems Engineering and Management  |
| C4ISR 與模式模擬特論 | 3  | EI1323C01 | Special Topics on C4ISR and Simulation Modeling       |
| 軟體工程特論        | 3  | EI1323C09 | Special Topics on Software Engineering                |
| 管理資訊系統理論與實務   | 3  | EI1323D03 | Management Information Systems                        |
| XML 技術應用      | 3  | EI1323D04 | Application of XML Technology                         |
| 物件導向分析與設計     | 3  | EI1323D05 | Object Oriented System Analysis and Design            |
| 數位影像處理        | 3  | EI1323D06 | Digital Image Processing                              |
| 人機介面分析與設計     | 3  | EI1323D07 | Human Machine Interface Analysis and Design           |
| 計算機通訊         | 3  | EI1323D08 | Computer Communications                               |
| 網際網路技術        | 3  | EI1323D09 | Internet Technologies                                 |
| 無線網路          | 3  | EI1323D10 | Wireless Networks                                     |
| 通訊協定設計        | 3  | EI1323D11 | Communication Protocols Design                        |
| 資料探勘          | 3  | EI1323D12 | Data Mining                                           |
| 數位訊號處理        | 3  | EI1323D13 | Digital Signal Processing                             |
| 高等編譯器理論       | 3  | EI1323D14 | Advanced Compiler Theory                              |
| 機器學習          | 3  | EI1323D15 | Machine Learning                                      |
| 模糊理論與應用       | 3  | EI1323D16 | Fuzzy Set Theory and It's Applications                |
| 類神經網路         | 3  | EI1323D17 | Neural Networks                                       |
| 網路模擬          | 3  | EI1323D18 | Network Simulation                                    |
| 網路程式設計        | 3  | EI1323D19 | Network Programming                                   |
| 排隊理論          | 3  | EI1323D20 | Queuing Theory                                        |
| 圖形識別          | 3  | EI1323D21 | Pattern Recognition                                   |
| 嵌入式系統         | 3  | EI1323D22 | Embedded System                                       |
| 高等計算機網路       | 3  | EI1323D23 | Advanced Computer Networks                            |
| 高等計算機結構       | 3  | EI1323D24 | Advanced Computer Architecture                        |
| 高等資料庫系統       | 3  | EI1323D25 | Advanced Database Systems                             |
| 高等作業系統        | 3  | EI1323D26 | Advanced Operating Systems                            |
| 高等演算法         | 3  | EI1323D27 | Advanced Algorithms                                   |
| 虛擬實境          | 3  | EI1323D28 | Virtual Reality                                       |
| 分散式系統         | 3  | EI1323D29 | Distributed Operating Systems                         |

國防大學理工學院國防科學研究所資訊工程組課程編碼及中英文名稱對照表

| 課目名稱        | 學分 | 科目編碼      | 英文名稱                                                                     |
|-------------|----|-----------|--------------------------------------------------------------------------|
| 高速網路        | 3  | EI1323D30 | High-Performance Computer Network                                        |
| 計算機視覺特論     | 3  | EI1323D31 | Special Topics on Computer Vision                                        |
| 多媒體系統特論     | 3  | EI1323D32 | Special Topics on Multimedia System                                      |
| 高等物件導向分析與設計 | 3  | EI1323D33 | Advanced Object-Oriented System Analysis and Design                      |
| 數位訊號處理特論    | 3  | EI1323D34 | Special Topics on Digital Signal Processing                              |
| 深度學習        | 3  | EI1323D35 | Deep Learning                                                            |
| 模糊理論與應用特論   | 3  | EI1323D36 | Special Topics on Fuzzy Set Theory and It's Applications                 |
| 類神經網路特論     | 3  | EI1323D40 | Special Topics on Neural Networks                                        |
| 網路模擬特論      | 3  | EI1323D40 | Special Topics on Network Simulation                                     |
| 排隊理論特論      | 3  | EI1323D40 | Special Topics on Queuing Theory                                         |
| 嵌入式系統特論     | 3  | EI1323D40 | Special Topics on Embedded System                                        |
| 分散式系統特論     | 3  | EI1323D41 | Special Topics on Distributed Operating Systems                          |
| 高速網路特論      | 3  | EI1323D41 | Special Topics on High Speed Networks                                    |
| 網路管理        | 3  | EI1323E01 | Network Management                                                       |
| 數位訊號處理      | 3  | EI1323E03 | Digital Signal Processing                                                |
| 數位影像處理      | 3  | EI1323E04 | Digital Image Processing                                                 |
| 網路攻防技術      | 3  | EI1323E05 | Network Offensive and Defensive Technology                               |
| 網路安全        | 3  | EI1323E06 | Network Security                                                         |
| 資訊確保概論      | 3  | EI1323E07 | Introduction to Information Assurance                                    |
| 資訊安全特論      | 3  | EI1323E08 | Special Topics on Information Security                                   |
| 多媒體安全       | 3  | EI1323E09 | Multimedia Security                                                      |
| 網路攻防技術特論    | 3  | EI1323E10 | Special Topics on Network Offensive and Defensive Technology             |
| 資訊確保架構設計    | 3  | EI1323E11 | Design of the Infrastructure for Information Assurance                   |
| 風險評估        | 3  | EI1323E12 | Risk Assessment                                                          |
| 資訊戰與資訊安全特論  | 3  | EI1323E13 | Special Topics on information warfare and Information Security           |
| 軟體工程特論      | 3  | EI1323E14 | Special Topics on Software Engineering                                   |
| 決策支援        | 3  | EI1323E15 | Decision Support                                                         |
| 數位鑑識特論      | 3  | EI1323E16 | Special Topics on Digital Forensics                                      |
| 行動通訊安全特論    | 3  | EI1323E17 | Special Topics on Wireless and Mobile Security                           |
| 密碼學特論       | 3  | EI1323E18 | Special Topics on Cryptography                                           |
| 網路安全防護      | 3  | EI1323E19 | Network Security Defensive Technology                                    |
| 網路安全防護特論    | 3  | EI1323E20 | Advanced Network Security Defensive Technology                           |
| 資訊確保        | 3  | EI1323E21 | Information Assurance                                                    |
| 資訊確保架構設計特論  | 3  | EI1323E22 | Special Topics on Design of the Infrastructure for Information Assurance |
| 決策支援系統      | 3  | EI1323E23 | Decision Support Systems                                                 |
| 資訊安全風險評估    | 3  | EI1323E24 | Information Security Risk Assessment                                     |

國防大學理工學院國防科學研究所化學及材料工程組課程編碼及中英文名稱對照表

| 課目名稱                                                                     | 學分 | 科目編碼      | 英文名稱                                      |
|--------------------------------------------------------------------------|----|-----------|-------------------------------------------|
| 必修                                                                       |    |           |                                           |
| 論文(1)                                                                    | 0  | EI1410A01 | Thesis(1)                                 |
| 論文(2)                                                                    | 0  | EI1410A02 | Thesis(2)                                 |
| 論文(3)                                                                    | 0  | EI1410A03 | Thesis(3)                                 |
| 論文(4)                                                                    | 0  | EI1410A04 | Thesis(4)                                 |
| 論文(5)                                                                    | 0  | EI1410A05 | Thesis(5)                                 |
| 論文(6)                                                                    | 0  | EI1410A06 | Thesis(6)                                 |
| 論文(7)                                                                    | 0  | EI1410A07 | Thesis(7)                                 |
| 論文(8)                                                                    | 0  | EI1410A08 | Thesis(8)                                 |
| 論文(9)                                                                    | 0  | EI1410A09 | Thesis(9)                                 |
| 論文(10)                                                                   | 0  | EI1410A10 | Thesis(10)                                |
| 論文(11)                                                                   | 0  | EI1410A11 | Thesis(11)                                |
| 論文(12)                                                                   | 0  | EI1410A12 | Thesis(12)                                |
| 論文(13)                                                                   | 0  | EI1410A13 | Thesis(13)                                |
| 論文(14)                                                                   | 0  | EI1410A14 | Thesis(14)                                |
| 論文(15)                                                                   | 0  | EI1410A15 | Thesis(15)                                |
| 論文(16)                                                                   | 0  | EI1410A16 | Thesis(16)                                |
| ※論文須俟學位口試通過後始賦予 12 學分                                                    |    |           |                                           |
| 專題討論(1)                                                                  | 0  | EI1410A17 | Seminar (1)                               |
| 專題討論(2)                                                                  | 0  | EI1410A18 | Seminar (2)                               |
| 專題討論(3)                                                                  | 0  | EI1410A19 | Seminar (3)                               |
| 專題討論(4)                                                                  | 0  | EI1410A20 | Seminar (4)                               |
| 專題討論(5)                                                                  | 0  | EI1410A21 | Seminar (5)                               |
| 專題討論(6)                                                                  | 0  | EI1410A22 | Seminar (6)                               |
| 專題討論(7)                                                                  | 0  | EI1410A23 | Seminar (7)                               |
| 專題討論(8)                                                                  | 2  | EI1412A24 | Seminar (8)                               |
| ※專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分 |    |           |                                           |
| 軍事科技研究                                                                   | 3  | EI0113A01 | Study in Military Technology              |
| 選修                                                                       |    |           |                                           |
| 物理化學特論                                                                   | 3  | EI1413C01 | Special Topics on Physical Chemistry      |
| 量子化學特論                                                                   | 3  | EI1413C02 | Special Topics on Quantum Chemistry       |
| 化學熱力學特論                                                                  | 3  | EI1413C03 | Special Topics on Chemical Thermodynamics |
| 有機合成特論                                                                   | 3  | EI1413C04 | Special Topics on Organic Synthesis       |
| 高等火藥分析                                                                   | 3  | EI1413C05 | Advanced Explosive Analysis               |
| 無機聚合物                                                                    | 3  | EI1413C06 | Inorganic Polymer                         |
| 有機化學特論                                                                   | 3  | EI1413C07 | Special Topics on Organic Chemistry       |
| 無機化學特論                                                                   | 3  | EI1413C08 | Special Topics on Inorganic Chemistry     |
| 化學動力學特論                                                                  | 3  | EI1413C09 | Special Topics on Chemical Kinetics       |
| 分析化學特論                                                                   | 3  | EI1413C10 | Special Topics on Analytical Chemistry    |

國防大學理工學院國防科學研究所化學及材料工程組課程編碼及中英文名稱對照表

| 課目名稱      | 學分 | 科目編碼      | 英文名稱                                                  |
|-----------|----|-----------|-------------------------------------------------------|
| 分子光譜學     | 3  | EI1413C11 | Molecular Spectroscopy                                |
| 催化劑合成     | 3  | EI1413C12 | Synthesis of Catalysts                                |
| 有機反應機構    | 3  | EI1413C13 | Organic Reaction Mechanism                            |
| 分子結構與群論   | 3  | EI1413C14 | Molecular Structure and Group Theory                  |
| 火藥反應機構    | 3  | EI1413C15 | Explosives Reaction Mechanism                         |
| 固態化學      | 3  | EI1413C16 | Solid State Chemistry                                 |
| 火藥合成特論    | 3  | EI1413C17 | Special Topics on Explosive Synthesis                 |
| 強吸附化學材料   | 3  | EI1413C18 | Strong Absorption Materials                           |
| 陶瓷化學      | 3  | EI1413C19 | Ceramic Chemistry                                     |
| 高等生物化學    | 3  | EI1413C20 | Advanced Biochemistry                                 |
| 微波吸收材料    | 3  | EI1413C21 | Microwave Absorbing Materials                         |
| 稀土金屬化合物   | 3  | EI1413C22 | Compounds of Rare Earth Metals                        |
| 光電材料化學    | 3  | EI1413C23 | Optoelectronic Materials Science                      |
| 高分子複合材料   | 3  | EI1413C24 | Polymer Composite Materials                           |
| 燃料電池與氫能   | 3  | EI1413C25 | Fuel Cell and Hydrogen Energy                         |
| 有機金屬化學    | 3  | EI1413C26 | Organometallic Chemistry                              |
| 奈米材料化學    | 3  | EI1413C27 | Nanomaterials Chemistry                               |
| 放射化學特論    | 3  | EI1413C28 | Special Topics on Radiochemistry                      |
| 有機-無機聚合物  | 3  | EI1413C29 | Organic-Inorganic Polymers                            |
| 無機合成特論    | 3  | EI1413C30 | Special Topics on Inorganic Synthesis                 |
| 固態化學特論    | 3  | EI1413C31 | Special Topics on Solid State Chemistry               |
| 高分子複合材料特論 | 3  | EI1413C32 | Special Topics on Polymer Composite Materials         |
| 有機金屬化學特論  | 3  | EI1413C33 | Special Topics on Organometallic Chemistry            |
| 奈米材料化學特論  | 3  | EI1413C34 | Special Topics on Nanomaterials Chemistry             |
| 強吸附化學材料特論 | 3  | EI1413C35 | Special Topics on Strong Absorption Materials         |
| 燃料電池與氫能特論 | 3  | EI1413C36 | Special Topics on Fuel Cell and Hydrogen Energy       |
| 火藥特論      | 3  | EI1413D01 | Special Topics on Explosive                           |
| 界面現象      | 3  | EI1413D02 | Interfacial Phenomena                                 |
| 輸送現象特論    | 3  | EI1413D03 | Special Topics on Transport Phenomena                 |
| 化學反應工程特論  | 3  | EI1413D04 | Special Topics on Chemical Reaction Engineering       |
| 電化學特論     | 3  | EI1413D05 | Special Topics on Electrochemistry                    |
| 化工熱力學特論   | 3  | EI1413D06 | Special Topics on Chemical Engineering Thermodynamics |
| 聚合物反應工程   | 3  | EI1413D07 | Polymer Reaction Engineering                          |
| 高分子機械性質   | 3  | EI1413D08 | Mechanical Properties of Polymer                      |
| 高分子學      | 3  | EI1413D09 | Macromolecules                                        |
| 聚合物結構與物性  | 3  | EI1413D10 | Polymer Structure and Properties                      |
| 程序安全學     | 3  | EI1413D11 | Process Safety                                        |
| 污染防治技術    | 3  | EI1413D12 | Pollution Control Technology                          |
| 微細製造特論    | 3  | EI1413D13 | Special Topics on Microfabrication                    |
| 質量傳送特論    | 3  | EI1413D14 | Special Topics on Mass Transfer                       |

國防大學理工學院國防科學研究所化學及材料工程組課程編碼及中英文名稱對照表

| 課目名稱       | 學分 | 科目編碼      | 英文名稱                                               |
|------------|----|-----------|----------------------------------------------------|
| 化工分離技術     | 3  | EI1413D15 | Separation Process Technology                      |
| 火藥製程安全學特論  | 3  | EI1413D16 | Special Topics on Explosive Process Safety         |
| 熱分析        | 3  | EI1413D17 | Thermal Analysis                                   |
| 高等燃燒學      | 3  | EI1413D18 | Advanced Combustion                                |
| 程序最適學      | 3  | EI1413D19 | Process Optimization                               |
| 高分子流變學     | 3  | EI1413D20 | Polymer Rheology                                   |
| 高等程序控制     | 3  | EI1413D21 | Advanced Process Control                           |
| 推進劑學特論     | 3  | EI1413D22 | Special Topics on Rocket Propellant                |
| 爆炸理論       | 3  | EI1413D23 | Detonation Theory                                  |
| 電極動力學特論    | 3  | EI1413D24 | Special Topics on Electrode Kinetics               |
| 粉粒體技術      | 3  | EI1413D25 | Powder Technology                                  |
| 生化工程       | 3  | EI1413D26 | Biochemical Engineering                            |
| 高分子加工      | 3  | EI1413D27 | Polymer Processing                                 |
| 火藥工廠設計     | 3  | EI1413D28 | Explosive Plant Design                             |
| 高等觸媒反應工程   | 3  | EI1413D29 | Advanced Catalytic Reaction                        |
| 陶瓷製程       | 3  | EI1413D30 | Ceramic Processing                                 |
| 電子顯微分析與應用  | 3  | EI1413D31 | Electron Micro-Analysis and Application            |
| 高分子學特論     | 3  | EI1413D32 | Special Topics on Macromolecules                   |
| 程序安全學特論    | 3  | EI1413D33 | Special Topics on Process Safety                   |
| 程序最適學特論    | 3  | EI1413D34 | Special Topics on Process Optimization             |
| 高分子加工特論    | 3  | EI1413D35 | Special Topics on Polymer Processing               |
| 高分子機械性質特論  | 3  | EI1413D36 | Special Topics on Mechanical Properties of Polymer |
| 聚合物結構與物性特論 | 3  | EI1413D40 | Special Topics on Polymer Structure and Properties |
| 程序控制特論     | 3  | EI1413D40 | Special Topics on Advanced Process Control         |
| 高等爆炸理論     | 3  | EI1413D40 | Advanced Detonation Theory                         |
| 化工分離技術特論   | 3  | EI1413D40 | Special Topics on Separation Process Technology    |
| 燃燒學特論      | 3  | EI1413D41 | Special Topics on Advanced Combustion              |
| 高分子流變學特論   | 3  | EI1413D41 | Special Topics on Polymer Rheology                 |
| 觸媒反應工程特論   | 3  | EI1413D43 | Special Topics on Catalytic Reaction               |
| 電子顯微分析特論   | 3  | EI1413D44 | Special Topics on Electron Microscopy              |
| 熱分析特論      | 3  | EI1413D45 | Special Topics on Thermal Analysis                 |
| 粉粒體技術特論    | 3  | EI1413D46 | Special Topics on Powder Technology                |
| 生化工程特論     | 3  | EI1413D47 | Special Topics on Biochemical Engineering          |
| 陶瓷製程特論     | 3  | EI1413D48 | Special Topics on Ceramic Processing               |
| 薄膜工程       | 3  | EI1413E01 | Thin Films Processing                              |
| 腐蝕工程       | 3  | EI1413E02 | Corrosion                                          |
| 半導體材料與製程   | 3  | EI1413E03 | Semiconductor Materials and Process                |
| 奈米科技與工程    | 3  | EI1413E04 | Nano Science and Technology                        |
| 感測器原理      | 3  | EI1413E05 | Sensors                                            |
| 材料熱力學特論    | 3  | EI1413E06 | Special Topics on Materials Thermodynamics         |

國防大學理工學院國防科學研究所化學及材料工程組課程編碼及中英文名稱對照表

| 課目名稱      | 學分 | 科目編碼      | 英文名稱                                                                        |
|-----------|----|-----------|-----------------------------------------------------------------------------|
| 高等物理冶金學   | 3  | EI1413E07 | Advanced Physical Metallurgy                                                |
| 材料動力學特論   | 3  | EI1413E08 | Special Topics on Kinetics of Materials                                     |
| 電子構裝      | 3  | EI1413E09 | Electronic Packaging                                                        |
| 實驗設計法     | 3  | EI1413E10 | Design and Analysis of Experiments                                          |
| 匿蹤材料學     | 3  | EI1413E11 | Stealth Materials                                                           |
| 材料加工學     | 3  | EI1413E12 | Machining of Materials                                                      |
| 差排理論      | 3  | EI1413E13 | Dislocation Theory                                                          |
| 流變學       | 3  | EI1413E14 | Plasticity                                                                  |
| 光顯示材料     | 3  | EI1413E15 | Display Technology and Materials                                            |
| 材料分析原理與應用 | 3  | EI1413E16 | Characterization of Materials                                               |
| X 光分析原理   | 3  | EI1413E17 | X-ray Diffraction                                                           |
| 能束加工      | 3  | EI1413E18 | Energy Beam Machining                                                       |
| 固化理論      | 3  | EI1413E19 | Solidification Theory                                                       |
| 粉末冶金      | 3  | EI1413E20 | Powder Metallurgy                                                           |
| 太陽能電池     | 3  | EI1413E21 | Solar Cells                                                                 |
| 材料光電磁性質   | 3  | EI1413E22 | Optical, Electronic, and Magnetic Properties of Materials                   |
| 材料破壞學     | 3  | EI1413E23 | Material Failures                                                           |
| 高溫材料學     | 3  | EI1413E24 | High Temperature Materials                                                  |
| 光電材料      | 3  | EI1413E25 | Materials for Optoelectronics                                               |
| 銲接學       | 3  | EI1413E26 | Theory of Welding                                                           |
| 磨潤學       | 3  | EI1413E27 | Tribology                                                                   |
| 系統工程與材料   | 3  | EI1413E28 | Weapon Systems and Materials                                                |
| 光電子學      | 3  | EI1413E29 | Introduction to Optoelectronics                                             |
| 固態物理特論    | 3  | EI1413E30 | Special Topics on Solid-State Physics                                       |
| 物理冶金學特論   | 3  | EI1413E31 | Special Topics on Physical Metallurgy                                       |
| 破壞分析特論    | 3  | EI1413E32 | Special Topics on Failures Analysis                                         |
| X 光分析特論   | 3  | EI1413E33 | Special Topics on X-ray Diffraction                                         |
| 奈米科技與工程特論 | 3  | EI1413E34 | Special Topics on Nano Science and Technology                               |
| 薄膜工程特論    | 3  | EI1413E35 | Special Topics on Thin Films Processing                                     |
| 腐蝕工程特論    | 3  | EI1413E36 | Special Topics on Corrosion                                                 |
| 匿蹤材料學特論   | 3  | EI1413E40 | Special Topics on Stealth Materials                                         |
| 材料加工特論    | 3  | EI1413E40 | Special Topics on Machining of Materials                                    |
| 光顯示材料特論   | 3  | EI1413E40 | Special Topics on Display Technology and Materials                          |
| 材料分析特論    | 3  | EI1413E41 | Special Topics on Characterization of Materials                             |
| 高等固化理論    | 3  | EI1413E41 | Advanced Solidification Theory                                              |
| 粉末冶金特論    | 3  | EI1413E43 | Special Topics on Powder Metallurgy                                         |
| 材料光電磁特論   | 3  | EI1413E44 | Special Topics on Optical, Electronic, and Magnetic Properties of Materials |
| 高溫材料特論    | 3  | EI1413E45 | Special Topics on High Temperature Materials                                |
| 銲接特論      | 3  | EI1413E46 | Special Topics on Welding                                                   |
| 磨潤特論      | 3  | EI1413E47 | Special Topics on Tribology                                                 |

國防大學理工學院國防科學研究所化學及材料工程組課程編碼及中英文名稱對照表

| 課目名稱       | 學分 | 科目編碼      | 英文名稱                                                  |
|------------|----|-----------|-------------------------------------------------------|
| 電子構裝特論     | 3  | EI1413E48 | Special Topics on Electronic Packaging                |
| 半導體材料與製程特論 | 3  | EI1413E49 | Special Topics on Semiconductor Materials and Process |
| 太陽能電池特論    | 3  | EI1413E50 | Special Topics on Solar Cells                         |
| 光電材料特論     | 3  | EI1413E51 | Special Topics on Materials for Optoelectronics       |
| 系統工程與材料特論  | 3  | EI1413E52 | Special Topics on Weapon Systems and Materials        |
| 高等光電子學     | 3  | EI1413E53 | Advanced Optoelectronics                              |
| 儲能材料特論     | 3  | EI1413E54 | Special Topics on Energy Storage Materials            |

國防大學理工學院國防科學研究所環境資訊及工程組課程編碼及中英文名稱對照表

| 課目名稱                                                                     | 學分 | 科目編碼      | 英文名稱                                             |
|--------------------------------------------------------------------------|----|-----------|--------------------------------------------------|
| 必修                                                                       |    |           |                                                  |
| 論文(1)                                                                    | 0  | EI1520A01 | Thesis(1)                                        |
| 論文(2)                                                                    | 0  | EI1520A02 | Thesis(2)                                        |
| 論文(3)                                                                    | 0  | EI1520A03 | Thesis(3)                                        |
| 論文(4)                                                                    | 0  | EI1520A04 | Thesis(4)                                        |
| 論文(5)                                                                    | 0  | EI1520A05 | Thesis(5)                                        |
| 論文(6)                                                                    | 0  | EI1520A06 | Thesis(6)                                        |
| 論文(7)                                                                    | 0  | EI1520A07 | Thesis(7)                                        |
| 論文(8)                                                                    | 0  | EI1520A08 | Thesis(8)                                        |
| 論文(9)                                                                    | 0  | EI1520A09 | Thesis(9)                                        |
| 論文(10)                                                                   | 0  | EI1520A10 | Thesis(10)                                       |
| 論文(11)                                                                   | 0  | EI1520A11 | Thesis(11)                                       |
| 論文(12)                                                                   | 0  | EI1520A12 | Thesis(12)                                       |
| 論文(13)                                                                   | 0  | EI1520A13 | Thesis(13)                                       |
| 論文(14)                                                                   | 0  | EI1520A14 | Thesis(14)                                       |
| 論文(15)                                                                   | 0  | EI1520A15 | Thesis(15)                                       |
| 論文(16)                                                                   | 0  | EI1520A16 | Thesis(16)                                       |
| ※論文須俟學位口試通過後始賦予 12 學分                                                    |    |           |                                                  |
| 專題討論(1)                                                                  | 0  | EI1520A17 | Seminar (1)                                      |
| 專題討論(2)                                                                  | 0  | EI1520A18 | Seminar (2)                                      |
| 專題討論(3)                                                                  | 0  | EI1520A19 | Seminar (3)                                      |
| 專題討論(4)                                                                  | 0  | EI1520A20 | Seminar (4)                                      |
| 專題討論(5)                                                                  | 0  | EI1520A21 | Seminar (5)                                      |
| 專題討論(6)                                                                  | 0  | EI1520A22 | Seminar (6)                                      |
| 專題討論(7)                                                                  | 0  | EI1520A23 | Seminar (7)                                      |
| 專題討論(8)                                                                  | 2  | EI1522A24 | Seminar (8)                                      |
| ※專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分 |    |           |                                                  |
| 軍事科技研究                                                                   | 3  | EI0113A01 | Study in Military Technology                     |
| 選修                                                                       |    |           |                                                  |
| 動力氣象學特論                                                                  | 3  | EI1523C01 | Specific Topics on Dynamic Meteorology           |
| 天氣學特論                                                                    | 3  | EI1523C02 | Special Topics on Synoptic Meteorology           |
| 數值分析特論                                                                   | 3  | EI1523C03 | Special Topics on Numerical Analysis             |
| 大氣遙測特論                                                                   | 3  | EI1523C04 | Special Topics on Atmospheric Remote Sensing     |
| 中尺度氣象學特論                                                                 | 3  | EI1523C05 | Special Topics on Meso-scale Meteorology         |
| 熱帶氣象學特論                                                                  | 3  | EI1523C06 | Special Topics on Tropical Meteorology           |
| 數值天氣預報特論                                                                 | 3  | EI1523C07 | Special Topics on Numerical Weather Prediction   |
| 大氣輻射                                                                     | 3  | EI1523C08 | Atmospheric Radiation                            |
| 雷達氣象特論                                                                   | 3  | EI1523C09 | Special Topics on Radar Meteorology              |
| 高等海洋物理學                                                                  | 3  | EI1523C10 | Advanced Physical Oceanography                   |
| 高等衛星微波降水反演                                                               | 3  | EI1523C11 | Advanced Satellite Microwave Rainfall Retrievals |

國防大學理工學院國防科學研究所環境資訊及工程組課程編碼及中英文名稱對照表

| 課目名稱        | 學分 | 科目編碼      | 英文名稱                                                          |
|-------------|----|-----------|---------------------------------------------------------------|
| 高等雲物理       | 3  | EI1523C12 | Advanced Cloud Physics                                        |
| 軍事氣象學特論     | 3  | EI1523C13 | Special Topics on Military Meteorology                        |
| 動力氣候學       | 3  | EI1523C14 | Dynamic Climatology                                           |
| 邊界層氣象學特論    | 3  | EI1523C15 | Special Topics on Boundary Layer Meteorology                  |
| 統計平差特論      | 3  | EI1523D01 | Special Topics on Survey Adjustment                           |
| 全球導航衛星系統特論  | 3  | EI1523D02 | Special Topics on GNSS                                        |
| 地理資訊系統特論    | 3  | EI1523D03 | Special Topics on GIS                                         |
| 遙感探測特論      | 3  | EI1523D04 | Special Topics on Remote Sensing                              |
| 海道測量學特論     | 3  | EI1523D05 | Special Topics on Hydrography                                 |
| 大地測量學特論     | 3  | EI1523D06 | Special Topics on Geodesy                                     |
| 整合式地理資訊系統特論 | 3  | EI1523D07 | Special Topics on Integrated GIS                              |
| 彩色複製特論      | 3  | EI1523D08 | Special Topics on Color Reproduction                          |
| 數值攝影測量特論    | 3  | EI1523D09 | Special Topics on Digital Photogrammetry                      |
| 物理大地測量學特論   | 3  | EI1523D10 | Special Topics on Physical Geodesy                            |
| 導航定位學特論     | 3  | EI1523D11 | Special Topics on Navigation and Positioning                  |
| 數值地形特論      | 3  | EI1523D12 | Special Topics on DTM                                         |
| 變形測量學特論     | 3  | EI1523D13 | Special Topics on Practice of Deformation Surveys             |
| 印刷傳播特論      | 3  | EI1523D14 | Special Topics on Printing Communication                      |
| 地球形狀學特論     | 3  | EI1523D15 | Special Topics on Earth Shape                                 |
| 防災工程特論      | 3  | EI1523E01 | Special Topics on Disaster Prevention Engineering             |
| 工程量測及監測     | 3  | EI1523E02 | Engineering Examining and Monitoring                          |
| 數位影像處理      | 3  | EI1523E03 | Digit Image Dealt                                             |
| 決策理論與方法     | 3  | EI1523E04 | Decision theory and Method                                    |
| 高等鋼筋混凝土學    | 3  | EI1523E05 | Advanced Reinforced Concrete                                  |
| 地震工程學       | 3  | EI1523E06 | Earthquake Engineering                                        |
| 高等環境控制      | 3  | EI1523E07 | Advanced Environmemtal Control                                |
| 營建工程專案管理特論  | 3  | EI1523E08 | Special Topics on Construction Project Management             |
| 論文寫作與表達     | 3  | EI1523E09 | Writing of Thesis and Expressing                              |
| 軍事防爆震工程     | 3  | EI1523E10 | Protective Engineering                                        |
| 耐震設計與評估     | 3  | EI1523E11 | Design and Assesment of Engineering of Resists Earthquake     |
| 彈性力學        | 3  | EI1523E12 | Elasticity theory                                             |
| 工程材料組成律     | 3  | EI1523E13 | Constitutive Law for Engineering Material                     |
| 航遙測在大地工程之應用 | 3  | EI1523E14 | The Application of Remote Sensing on Geotechnical Engineering |
| 大地工程特論      | 3  | EI1523E15 | Special Topics on Geotechnical Engineering                    |
| 軍事防爆震工程特論   | 3  | EI1523E16 | Special Topics on Protective Engineering                      |

國防大學理工學院國防科學研究所電機電子工程組課程編碼及中英文名稱對照表

| 課目名稱                                                                     | 學分 | 科目編碼      | 英文名稱                           |
|--------------------------------------------------------------------------|----|-----------|--------------------------------|
| 必修                                                                       |    |           |                                |
| 論文(1)                                                                    | 0  | EI1620A01 | Thesis(1)                      |
| 論文(2)                                                                    | 0  | EI1620A02 | Thesis(2)                      |
| 論文(3)                                                                    | 0  | EI1620A03 | Thesis(3)                      |
| 論文(4)                                                                    | 0  | EI1620A04 | Thesis(4)                      |
| 論文(5)                                                                    | 0  | EI1620A05 | Thesis(5)                      |
| 論文(6)                                                                    | 0  | EI1620A06 | Thesis(6)                      |
| 論文(7)                                                                    | 0  | EI1620A07 | Thesis(7)                      |
| 論文(8)                                                                    | 0  | EI1620A08 | Thesis(8)                      |
| 論文(9)                                                                    | 0  | EI1620A09 | Thesis(9)                      |
| 論文(10)                                                                   | 0  | EI1620A10 | Thesis(10)                     |
| 論文(11)                                                                   | 0  | EI1620A11 | Thesis(11)                     |
| 論文(12)                                                                   | 0  | EI1620A12 | Thesis(12)                     |
| 論文(13)                                                                   | 0  | EI1620A13 | Thesis(13)                     |
| 論文(14)                                                                   | 0  | EI1620A14 | Thesis(14)                     |
| 論文(15)                                                                   | 0  | EI1620A15 | Thesis(15)                     |
| 論文(16)                                                                   | 0  | EI1620A16 | Thesis(16)                     |
| ※論文須俟學位口試通過後始賦予 12 學分                                                    |    |           |                                |
| 專題討論(1)                                                                  | 0  | EI1620A17 | Seminar (1)                    |
| 專題討論(2)                                                                  | 0  | EI1620A18 | Seminar (2)                    |
| 專題討論(3)                                                                  | 0  | EI1620A19 | Seminar (3)                    |
| 專題討論(4)                                                                  | 0  | EI1620A20 | Seminar (4)                    |
| 專題討論(5)                                                                  | 0  | EI1620A21 | Seminar (5)                    |
| 專題討論(6)                                                                  | 0  | EI1620A22 | Seminar (6)                    |
| 專題討論(7)                                                                  | 0  | EI1620A23 | Seminar (7)                    |
| 專題討論(8)                                                                  | 2  | EI1622A24 | Seminar (8)                    |
| ※專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分 |    |           |                                |
| 軍事科技研究                                                                   | 3  | EI0113A01 | Study in Military Technology   |
| 選修                                                                       |    |           |                                |
| 數理統計                                                                     | 3  | EI1623B01 | Mathematical Statistics        |
| 數值方法                                                                     | 3  | EI1623B02 | Numerical Method               |
| 隨機過程                                                                     | 3  | EI1623B03 | Random Process                 |
| 計算機結構                                                                    | 3  | EI1623B04 | Computer Architecture          |
| 計算機網路                                                                    | 3  | EI1623B05 | Computer Networks              |
| 演算法                                                                      | 3  | EI1623B06 | Algorithms                     |
| 電子戰                                                                      | 3  | EI1623B07 | Electronic Warfare             |
| 高等程式設計                                                                   | 3  | EI1623B08 | Advanced Program Design        |
| 高等隨機過程                                                                   | 3  | EI1623B09 | Advanced Random Proces         |
| 高等計算機結構                                                                  | 3  | EI1623B10 | Advanced Computer Architecture |
| 高等計算機網路                                                                  | 3  | EI1623B11 | Advanced Computer Networks     |

國防大學理工學院國防科學研究所電機電子工程組課程編碼及中英文名稱對照表

| 課目名稱         | 學分 | 科目編碼      | 英文名稱                                                    |
|--------------|----|-----------|---------------------------------------------------------|
| 多媒體通訊        | 3  | EI1623C01 | Multimedia Communications                               |
| 數位訊號處理       | 3  | EI1623C02 | Digital Signal Processing                               |
| 適應性訊號處理      | 3  | EI1623C03 | Adaptive Signal Processing                              |
| 通訊理論         | 3  | EI1623C04 | Communication Theory                                    |
| 錯誤控制編碼       | 3  | EI1623C05 | Error Control Coding                                    |
| 雷達訊號處理       | 3  | EI1623C06 | Radar Signal Processing                                 |
| 數位通訊訊號處理     | 3  | EI1623C07 | Digital Communication Signal Processing                 |
| 陣列訊號處理       | 3  | EI1623C08 | Array Signal Processing                                 |
| 無線通訊         | 3  | EI1623C09 | Wireless Communications                                 |
| 統計通訊         | 3  | EI1623C10 | Statistical Communication                               |
| 訊息理論         | 3  | EI1623C11 | Information Theory                                      |
| 高等影像壓縮編碼     | 3  | EI1623C12 | Advanced Image Compression                              |
| 高等訊源編碼       | 3  | EI1623C13 | Advanced Source Coding                                  |
| 排隊理論         | 3  | EI1623C14 | Queueing Theory                                         |
| 電腦通訊網路       | 3  | EI1623C15 | Computer Communications                                 |
| 雷達系統工程       | 3  | EI1623C16 | Radar System Engineering                                |
| 語音訊號處理       | 3  | EI1623C17 | Speech Signal Processing                                |
| 小波理論         | 3  | EI1623C18 | Wavelet Transform                                       |
| 行動通訊         | 3  | EI1623C19 | Mobile Communications                                   |
| 衛星通訊         | 3  | EI1623C20 | Satellite Communications                                |
| 展頻通訊         | 3  | EI1623C21 | Spread Spectrum Communications                          |
| 保密通訊         | 3  | EI1623C22 | Secure Communications                                   |
| 編碼理論         | 3  | EI1623C23 | Coding Theory                                           |
| 訊號處理專題特論     | 3  | EI1623C24 | Special Topics on Signal Processing                     |
| 通訊專題特論       | 3  | EI1623C25 | Special Topics on Communications                        |
| 衛星通訊專題特論     | 3  | EI1623C26 | Special Topics on Satellite Communications              |
| 編碼專題特論       | 3  | EI1623C27 | Special Topics on Advanced Coding Theory                |
| 編碼理論應用       | 3  | EI1623C28 | Application of Coding Theory                            |
| 電磁理論         | 3  | EI1623C29 | Electromagnetic Theory                                  |
| 微波工程         | 3  | EI1623C30 | Advanced Microwave Engineering                          |
| 天線工程         | 3  | EI1623C31 | Antenna Engineering                                     |
| 高等電磁理論       | 3  | EI1623C32 | Advanced Electromagnetic Theory                         |
| 微波電路設計       | 3  | EI1623C33 | Microwave Circuit Designs                               |
| 微波匿蹤應用技術     | 3  | EI1623C34 | Stealth Technologies                                    |
| 天線設計與分析      | 3  | EI1623C35 | Antenna Design and Analysis                             |
| 雷達截面積分析與設計   | 3  | EI1623C40 | Radar-Cross-Section Analysis and Design                 |
| 平面式衛星與行動通訊天線 | 3  | EI1623C40 | Planar Antennas for Satellite and Mobile Communications |
| 天線設計特論       | 3  | EI1623C40 | Special Topics on Antenna Designs                       |
| 高等數位訊號處理     | 3  | EI1623C40 | Advanced Digital Signal Processing                      |
| 高等通訊理論       | 3  | EI1623C40 | Advanced Communication Theory                           |

國防大學理工學院國防科學研究所電機電子工程組課程編碼及中英文名稱對照表

| 課目名稱        | 學分 | 科目編碼      | 英文名稱                                                    |
|-------------|----|-----------|---------------------------------------------------------|
| 電磁波理論       | 3  | EI1623C41 | Electromagnetic Wave Theory                             |
| 高等微波工程      | 3  | EI1623C41 | Advanced Advanced Microwave Engineering                 |
| 高等天線工程      | 3  | EI1623C43 | Advanced Antenna Engineering                            |
| 電磁波傳播       | 3  | EI1623C44 | Electromagnetic Propagationa                            |
| 類神經網路特論     | 3  | EI1623D01 | Special Topics on Neural Networks                       |
| 內連結網路特論     | 3  | EI1623D02 | Special Topics on Interconnection Networks              |
| 超大型積體電路設計特論 | 3  | EI1623D03 | Special Topics on VLSI Design                           |
| 數位訊號處理器應用   | 3  | EI1623D04 | Applications of Digital Signal Processors               |
| 計算機數學       | 3  | EI1623D05 | Computer Mathematics                                    |
| 嵌入式微處理機系統   | 3  | EI1623D06 | Embedded Microprocessors                                |
| 資訊安全        | 3  | EI1623D07 | Information Security                                    |
| 進階計算機輔助電路設計 | 3  | EI1623D08 | Advanced Computer Aided Circuit Design                  |
| 模糊理論與應用特論   | 3  | EI1623D09 | Special Topics in Fuzzy Theory and Applications         |
| 生物資訊特論      | 3  | EI1623D10 | Special Topics on Bioinformatics                        |
| 分散式資料庫特論    | 3  | EI1623D11 | Special Topics on Distributed Database                  |
| 分散式系統特論     | 3  | EI1623D12 | Special Topics on Distributed Systems                   |
| 數位影像處理      | 3  | EI1623D13 | Digital Image Processing                                |
| 分散式模擬特論     | 3  | EI1623D14 | Special Topics on Distributed Simulation                |
| 嵌入式作業系統應用   | 3  | EI1623D15 | Embedded Operating System Applications                  |
| 密碼學特論       | 3  | EI1623D16 | Special Topics on Cryptography                          |
| 多媒體安全       | 3  | EI1623D17 | Multimedia Security                                     |
| 作業系統特論      | 3  | EI1623D18 | Special Topics on Operating Systems                     |
| Linux 作業系統  | 3  | EI1623D19 | Linux Operating System                                  |
| 網路程式設計      | 3  | EI1623D20 | Network Program Design                                  |
| 系統分析與設計     | 3  | EI1623D21 | System Analysis and Design                              |
| 基因演算法特論     | 3  | EI1623D22 | Special Topics on Genetic Algorithms                    |
| 平行編譯器特論     | 3  | EI1623D23 | Special Topics on Parallel Compiler                     |
| 平行處理特論      | 3  | EI1623D24 | Special Topics on Parallel Processing                   |
| 衛星遙測影像處理    | 3  | EI1623D25 | Remote Sensing Image Processing                         |
| 軟體工程特論      | 3  | EI1623D26 | Special Topics on Software Engineering                  |
| 物件導向技術特論    | 3  | EI1623D27 | Special Topics on Object Oriented Programming Technique |
| 生物認證        | 3  | EI1623D28 | Biometric Identification                                |
| 圖形識別        | 3  | EI1623D29 | Pattern Recognition                                     |
| 即時計算機特論     | 3  | EI1623D30 | Special Topics on Real-Time Computer                    |
| 資訊隱藏        | 3  | EI1623D31 | Information Hiding                                      |
| 高等電力電子學     | 3  | EI1623D32 | Advanced Power Electronics                              |
| 線性系統        | 3  | EI1623D33 | Linear System Theory                                    |
| 近代控制特論      | 3  | EI1623D34 | Special Topics on Modern Control                        |
| 控制系統理論      | 3  | EI1623D35 | Control System Theory                                   |
| 數位控制        | 3  | EI1623D40 | Digital Control System                                  |

國防大學理工學院國防科學研究所電機電子工程組課程編碼及中英文名稱對照表

| 課目名稱             | 學分 | 科目編碼      | 英文名稱                                                       |
|------------------|----|-----------|------------------------------------------------------------|
| 電子自動化            | 3  | EI1623D40 | E-Automation                                               |
| Petri nets 理論與應用 | 3  | EI1623D40 | Theory and Application of Petri nets                       |
| 最佳控制             | 3  | EI1623D40 | Optimal Control                                            |
| 強健控制理論           | 3  | EI1623D40 | Robust Control Theory                                      |
| 高等模糊理論           | 3  | EI1623D41 | Advanced Fuzzy Theory                                      |
| 適應控制             | 3  | EI1623D41 | Adaptive Control                                           |
| 高等 DSP 程式設計      | 3  | EI1623D43 | Advanced DSP Programming                                   |
| 電子自動化專題          | 3  | EI1623D44 | Special Topics on E-Automation                             |
| 物件導向分析與設計        | 3  | EI1623D45 | Object-Oriented Analysis and Design                        |
| 互動系統             | 3  | EI1623D46 | Reactive Systems                                           |
| 高等交流電機控制         | 3  | EI1623D47 | Advanced AC Machine Control                                |
| 導引與控制            | 3  | EI1623D48 | Guidance and Control                                       |
| 非線性控制特論          | 3  | EI1623D49 | Special Topics on Nonlinear Control                        |
| 離散事件動態系統         | 3  | EI1623D50 | Discrete Event Dynamic Systems                             |
| 彈性製造系統分析與設計      | 3  | EI1623D51 | Design and Analysis of FMSs                                |
| 射頻辨識系統設計         | 3  | EI1623D52 | Design of RFID Systems                                     |
| 智慧型控制分析與設計       | 3  | EI1623D53 | Analysis and Design of Intelligent Control                 |
| 資訊安全特論           | 3  | EI1623D54 | Special Topics on Information Security                     |
| 高等數位控制           | 3  | EI1623D55 | Advanced Digital Control System                            |
| 高等電子自動化          | 3  | EI1623D56 | Advanced E-Automation                                      |
| 光電子學             | 3  | EI1623E01 | Optoelectronics                                            |
| 近代光學             | 3  | EI1623E02 | Modern Optics                                              |
| 高等光電工程           | 3  | EI1623E03 | Advanced Optoelectronic Engineering                        |
| 高等半導體光學          | 3  | EI1623E04 | Advanced Semiconductor Optics                              |
| 光電材料設計           | 3  | EI1623E05 | Design of Optoelectronics Materials                        |
| 光學薄膜設計           | 3  | EI1623E06 | Design of Optical Thin Film                                |
| 光譜學              | 3  | EI1623E07 | Spectroscopy                                               |
| 光纖通訊原理、技術及應用     | 3  | EI1623E08 | Principles and Applications of Optical Fiber Communication |
| 理論光學             | 3  | EI1623E09 | Principles of Optics                                       |
| 紅外線工程            | 3  | EI1623E10 | Infrared Engineering                                       |
| 雷射原理、技術及工程應用     | 3  | EI1623E11 | Principle, Technology and Engineering Application of Laser |
| 幾何光學設計           | 3  | EI1623E12 | Geometrical Optics Design                                  |
| 精密光學量測           | 3  | EI1623E13 | Advanced Optical Measurement                               |
| 平面顯示器原理及應用       | 3  | EI1623E14 | Principles and Applications of Flat Panel Display          |
| 奈米光學             | 3  | EI1623E15 | Nano-Optics                                                |
| 非線性光學特論          | 3  | EI1623E16 | Special Topics on Advanced Nonlinear Optics                |
| 量子光學訊號處理         | 3  | EI1623E17 | Quantum Optical Information Processing                     |
| 半導體元件物理          | 3  | EI1623E18 | Semiconductor Devices Physics                              |
| 高等固態物理           | 3  | EI1623E19 | Advanced Solid State Physics                               |
| 金氧半製程技術          | 3  | EI1623E20 | MOS Processing Technology                                  |

國防大學理工學院國防科學研究所電機電子工程組課程編碼及中英文名稱對照表

| 課目名稱        | 學分 | 科目編碼      | 英文名稱                                        |
|-------------|----|-----------|---------------------------------------------|
| 電子材料分析      | 3  | EI1623E21 | Analysis for Electronic Materials           |
| 微電子技術       | 3  | EI1623E22 | Microelectronic Technology                  |
| 高等固態電子元件    | 3  | EI1623E23 | Advanced Solid-state Electronic Devices     |
| 半導體元件量測     | 3  | EI1623E24 | Measurement of Semiconductor Devices        |
| 高等量子力學      | 3  | EI1623E25 | Advanced Quantum Mechanics                  |
| 進階積體電路製程整合  | 3  | EI1623E26 | Advanced IC Process Integration             |
| 化合物半導體技術    | 3  | EI1623E27 | Compound Semiconductor Technology           |
| 近代電子構裝技術    | 3  | EI1623E28 | Modern Electronic Packaging Technology      |
| 高階微波積體電路    | 3  | EI1623E30 | Advanced Microwave IC                       |
| 磊晶工程        | 3  | EI1623E31 | Epitaxy Engineering                         |
| 近代記憶體技術     | 3  | EI1623E32 | Modern Memories Technology                  |
| 光電元件        | 3  | EI1623E33 | Optoelectronics Devices                     |
| 高階感測元件設計與分析 | 3  | EI1623E34 | Advanced Sensor Devices Design and Analysis |
| 半導體微波元件     | 3  | EI1623E35 | Semiconductor Microwave Devices             |
| 沉積及薄膜技術     | 3  | EI1623E40 | Deposition and Thin Film Technology         |
| 雷射半導體設計     | 3  | EI1623E40 | Semiconductor Laser Designs                 |
| 半導體元件分析     | 3  | EI1623E40 | Analysis for Semiconductor Devices          |
| 高等光電子學      | 3  | EI1623E40 | Advanced Optoelectronics                    |
| 高等近代光學      | 3  | EI1623E40 | Advanced Modern Optics                      |
| 高等半導體元件物理   | 3  | EI1623E41 | Advanced Semiconductor Devices Physics      |
| 高等微電子技術     | 3  | EI1623E41 | Advanced Microelectronic Technology         |
| 奈米物理及奈米技術   | 3  | EI1623E43 | Nanophysics and Nanotechnology              |

國防大學理工學院國防科學研究所動力及系統工程組課程編碼及中英文名稱對照表

| 課目名稱                                                                     | 學分 | 科目編碼      | 英文名稱                                      |
|--------------------------------------------------------------------------|----|-----------|-------------------------------------------|
| 必修                                                                       |    |           |                                           |
| 論文(1)                                                                    | 0  | EI1720A01 | Thesis(1)                                 |
| 論文(2)                                                                    | 0  | EI1720A02 | Thesis(2)                                 |
| 論文(3)                                                                    | 0  | EI1720A03 | Thesis(3)                                 |
| 論文(4)                                                                    | 0  | EI1720A04 | Thesis(4)                                 |
| 論文(5)                                                                    | 0  | EI1720A05 | Thesis(5)                                 |
| 論文(6)                                                                    | 0  | EI1720A06 | Thesis(6)                                 |
| 論文(7)                                                                    | 0  | EI1720A07 | Thesis(7)                                 |
| 論文(8)                                                                    | 0  | EI1720A08 | Thesis(8)                                 |
| 論文(9)                                                                    | 0  | EI1720A09 | Thesis(9)                                 |
| 論文(10)                                                                   | 0  | EI1720A10 | Thesis(10)                                |
| 論文(11)                                                                   | 0  | EI1720A11 | Thesis(11)                                |
| 論文(12)                                                                   | 0  | EI1720A12 | Thesis(12)                                |
| 論文(13)                                                                   | 0  | EI1720A13 | Thesis(13)                                |
| 論文(14)                                                                   | 0  | EI1720A14 | Thesis(14)                                |
| 論文(15)                                                                   | 0  | EI1720A15 | Thesis(15)                                |
| 論文(16)                                                                   | 0  | EI1720A16 | Thesis(16)                                |
| ※論文須俟學位口試通過後始賦予 12 學分                                                    |    |           |                                           |
| 專題討論(1)                                                                  | 0  | EI1720A17 | Seminar (1)                               |
| 專題討論(2)                                                                  | 0  | EI1720A18 | Seminar (2)                               |
| 專題討論(3)                                                                  | 0  | EI1720A19 | Seminar (3)                               |
| 專題討論(4)                                                                  | 0  | EI1720A20 | Seminar (4)                               |
| 專題討論(5)                                                                  | 0  | EI1720A21 | Seminar (5)                               |
| 專題討論(6)                                                                  | 0  | EI1720A22 | Seminar (6)                               |
| 專題討論(7)                                                                  | 0  | EI1720A23 | Seminar (7)                               |
| 專題討論(8)                                                                  | 2  | EI1722A24 | Seminar (8)                               |
| ※專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分 |    |           |                                           |
| 兵器系統效益評估                                                                 | 3  | EI1723A25 | Weapon System Effectiveness               |
| 軍事科技研究                                                                   | 3  | EI0113A01 | Study in Military Technology              |
| 選修                                                                       |    |           |                                           |
| 高等後勤工程                                                                   | 3  | EI1723C01 | Advanced Logistics Engineering            |
| 高等熱傳學                                                                    | 3  | EI1723C02 | Advanced Heat Transfer                    |
| 人工智慧                                                                     | 3  | EI1723C03 | Artificial Intelligence                   |
| 強健控制理論                                                                   | 3  | EI1723C04 | Robust Control Theory                     |
| 流體與結構耦合作用                                                                | 3  | EI1723C05 | Coupling Effects for Fluid and Structures |
| 武器系統表面工程                                                                 | 3  | EI1723C06 | Surface Engineering of Weapon Systems     |
| 連體力學                                                                     | 3  | EI1723C07 | Continuum Mechanics                       |
| 金屬潛變學                                                                    | 3  | EI1723C08 | Creep Theory of Alloys                    |
| 高等系統工程                                                                   | 3  | EI1723C09 | Advanced Systems Engineering              |

國防大學理工學院國防科學研究所動力及系統工程組課程編碼及中英文名稱對照表

| 課目名稱                  | 學分 | 科目編碼      | 英文名稱                                                                      |
|-----------------------|----|-----------|---------------------------------------------------------------------------|
| 高等振動學                 | 3  | EI1723C10 | Advanced Theory of Vibration                                              |
| 貫穿力學                  | 3  | EI1723C11 | Penetration Mechanics                                                     |
| 高速風洞試驗方法              | 3  | EI1723C12 | High-Speed Wind Tunnel Testing                                            |
| 計算流力與軍用載具構型設計         | 3  | EI1723C13 | CFD and Military Vehicle Configuration Design                             |
| 軍艦設計特論                | 3  | EI1723C14 | Special Topics on Naval Ship Design                                       |
| 載具先進動力系統              | 3  | EI1723C15 | Advanced Power Systems of Vehicle                                         |
| 戰鬥載具運動力學              | 3  | EI1723C16 | Vehicle Dynamics of Armored Vehicle                                       |
| 熱系統設計                 | 3  | EI1723C17 | Design of Thermal Systems                                                 |
| 高等有限元素分析              | 3  | EI1723C18 | Advanced Finite Element Analysis                                          |
| 高等可靠度工程               | 3  | EI1723C19 | Advanced Reliability Engineering                                          |
| 氣動力特論                 | 3  | EI1723C20 | Special Topics on Gas Dynamics                                            |
| 火箭工程                  | 3  | EI1723C21 | Rockets Engineering                                                       |
| 結構最佳化設計               | 3  | EI1723C22 | Optimal Design of Structure                                               |
| 混沌與非線性理論              | 3  | EI1723C23 | Chaos and Nonlinear Theory                                                |
| 壽期成本及效益分析             | 3  | EI1723C24 | Life Cost and Efficiency Analysis                                         |
| 超音速空氣動力學              | 3  | EI1723C25 | Supersonic Aerodynamics                                                   |
| 飛行器設計                 | 3  | EI1723C26 | Preliminary Configuration Design of Aircrafts                             |
| 飛具結構設計                | 3  | EI1723C27 | Design of Aircraft Structure                                              |
| 紊流理論                  | 3  | EI1723C28 | Turbulent Flow Theory                                                     |
| 複合材料力學特論              | 3  | EI1723C29 | Special Topics on Mechanics of Composite Materials                        |
| 光學及電子顯微鏡分析技術<br>與應用實務 | 3  | EI1723C30 | Analysis Techniques and Application of Optical<br>and Electron Microscope |
| 高等地面載具運動力學            | 3  | EI1723C31 | Advanced Road Vehicle Dynamics                                            |
| 高等船艦運動力學              | 3  | EI1723C32 | Advanced Dynamics of Marine Vehicle                                       |
| 飛彈設計特論                | 3  | EI1723C33 | Special Topics on Missile Design                                          |
| 動力系統專題特論              | 3  | EI1723C34 | Special Topics on Power Vehicle and Systems Engineering                   |

國防大學理工學院國防科學研究所機械及航太工程組課程編碼及中英文名稱對照表

| 課目名稱                                                                     | 學分 | 科目編碼      | 英文名稱                                      |
|--------------------------------------------------------------------------|----|-----------|-------------------------------------------|
| 必修                                                                       |    |           |                                           |
| 論文(1)                                                                    | 0  | EI1820A01 | Thesis(1)                                 |
| 論文(2)                                                                    | 0  | EI1820A02 | Thesis(2)                                 |
| 論文(3)                                                                    | 0  | EI1820A03 | Thesis(3)                                 |
| 論文(4)                                                                    | 0  | EI1820A04 | Thesis(4)                                 |
| 論文(5)                                                                    | 0  | EI1820A05 | Thesis(5)                                 |
| 論文(6)                                                                    | 0  | EI1820A06 | Thesis(6)                                 |
| 論文(7)                                                                    | 0  | EI1820A07 | Thesis(7)                                 |
| 論文(8)                                                                    | 0  | EI1820A08 | Thesis(8)                                 |
| 論文(9)                                                                    | 0  | EI1820A09 | Thesis(9)                                 |
| 論文(10)                                                                   | 0  | EI1820A10 | Thesis(10)                                |
| 論文(11)                                                                   | 0  | EI1820A11 | Thesis(11)                                |
| 論文(12)                                                                   | 0  | EI1820A12 | Thesis(12)                                |
| 論文(13)                                                                   | 0  | EI1820A13 | Thesis(13)                                |
| 論文(14)                                                                   | 0  | EI1820A14 | Thesis(14)                                |
| 論文(15)                                                                   | 0  | EI1820A15 | Thesis(15)                                |
| 論文(16)                                                                   | 0  | EI1820A16 | Thesis(16)                                |
| ※論文須俟學位口試通過後始賦予 12 學分                                                    |    |           |                                           |
| 專題討論(1)                                                                  | 0  | EI1820A17 | Seminar (1)                               |
| 專題討論(2)                                                                  | 0  | EI1820A18 | Seminar (2)                               |
| 專題討論(3)                                                                  | 0  | EI1820A19 | Seminar (3)                               |
| 專題討論(4)                                                                  | 0  | EI1820A20 | Seminar (4)                               |
| 專題討論(5)                                                                  | 0  | EI1820A21 | Seminar (5)                               |
| 專題討論(6)                                                                  | 0  | EI1820A22 | Seminar (6)                               |
| 專題討論(7)                                                                  | 0  | EI1820A23 | Seminar (7)                               |
| 專題討論(8)                                                                  | 2  | EI1822A24 | Seminar (8)                               |
| ※專題討論須修習 8 學期，每週 2 小時，每學期應登錄成績（0 學分），於第 8 學期核算各學期成績予以平均，俟學位口試通過後始賦予 2 學分 |    |           |                                           |
| 軍事科技研究                                                                   | 3  | EI0113A01 | Study in Military Technology              |
| 選修                                                                       |    |           |                                           |
| 數學方法                                                                     | 3  | EI1823B01 | Mathematical Methods                      |
| 高等系統識別                                                                   | 3  | EI1823C01 | Advanced System Identification            |
| 機電整合特論                                                                   | 3  | EI1823C02 | Special Topics on Mechatronics            |
| 線性系統特論                                                                   | 3  | EI1823C03 | Special Topics on Linear Systems Theory   |
| 人工智慧特論                                                                   | 3  | EI1823C04 | Special Topics on Artificial Intelligence |
| 系統模擬                                                                     | 3  | EI1823C06 | System Simulation                         |
| 導引與控制                                                                    | 3  | EI1823C07 | Guidance and Control                      |
| 導引與控制特論                                                                  | 3  | EI1823C09 | Special Topics on Guidance and Control    |
| 非線性系統理論                                                                  | 3  | EI1823C10 | Nonlinear System Theory                   |
| 非線性控制特論                                                                  | 3  | EI1823C11 | Special Topics on Nonlinear Control       |

國防大學理工學院國防科學研究所機械及航太工程組課程編碼及中英文名稱對照表

| 課目名稱      | 學分 | 科目編碼      | 英文名稱                                             |
|-----------|----|-----------|--------------------------------------------------|
| 流體力學特論    | 3  | EI1823D01 | Special Topics on Fluid Dynamics                 |
| 熱力學特論     | 3  | EI1823D02 | Special Topics on Thermodynamics                 |
| 熱傳學特論     | 3  | EI1823D03 | Special Topics on Heat Transfer                  |
| 噴射推進特論    | 3  | EI1823D04 | Special Topics on Jet Propulsion                 |
| 高等計算流體力學  | 3  | EI1823D05 | Advanced Computational Fluid Dynamics            |
| 熱流實驗設計與分析 | 3  | EI1823D06 | Design and Analysis of Thermal-Fluid Experiments |
| 能源工程特論    | 3  | EI1823D07 | Special Topics on Energy Engineering             |
| 氣渦輪機特論    | 3  | EI1823D08 | Special Topics on Gas Turbine Engine             |
| 彈體氣動力設計   | 3  | EI1823D09 | Projectile Aerodynamic Design                    |
| 工程設計特論    | 3  | EI1823E01 | Special Topics on Engineering Design             |
| 高等有限元素法   | 3  | EI1823E02 | Advanced Finite Element Method                   |
| 高等彈性力學    | 3  | EI1823E03 | Advanced Topics on Elasticity                    |
| 高等製造分析    | 3  | EI1823E04 | Advanced Manufacturing Analysis                  |
| 波動力學      | 3  | EI1823E05 | Wave Mechanics                                   |
| 固體力學      | 3  | EI1823E06 | Solid Mechanics                                  |
| 最佳化理論     | 3  | EI1823E07 | Optimization Theory                              |
| 連體力學      | 3  | EI1823E08 | Continuum Mechanics                              |