

明志科技大學四技部 102 學年度入學 化學工程系 課程總表

102/04/01院課程委員會審議通過
102/03/27系務會議審議通過
102/03/14系課程委員會審議通過

| 科目名稱 | 一上 | | 一下 | | 二上 | | 二下 | | 三上 | | 三下 | | 四上 | | 四下 | | 選課條件 | 每班人數 上 下 | 備註 |
|---|----|-----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|------|-------------|---------------------|
| | 學分 | 時數 | 學分 | 時數 | 學分 | 時數 | 學分 | 時數 | 學分 | 時數 | 學分 | 時數 | 學分 | 時數 | 學分 | 時數 | | | |
| 基礎 | | | | | | | | | | | | | | | | | | | |
| 國文(Chinese) | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | |
| 英文(English) | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | |
| 全民國防教育軍事訓練(All-out Defense Education Military Training) | 0 | 2 | 0 | 2 | | | | | | | | | | | | | | | |
| 體育(Physical Education) | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | | | | | | | | | | | |
| (英語聽講(Aural-Oral English)) | | | | | 1 | 2 | 1 | 2 | | | | | | | | | | | |
| 歷史(History) | | | 3 | 3 | | | | | | | | | | | | | | | |
| 憲政與發展(Constitution & Democratic Development) | 3 | 3 | | | | | | | | | | | | 0 | 2 | | | | |
| 英文輔導(English Tutorial) | | | | | | | | | | | | | | | | | | 50 | 修課總人數不限 |
| 合計 | 9 | 13 | 9 | 13 | 1 | 4 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | | |
| 核心課程 | | | | | | | | | | | | | | | | | | | |
| 大學之道(The Goal of University Education) | 1 | 2 | | | | | | | | | | | | | | | | | |
| 服務學習(Service Learning) | | | 1 | 2 | | | | | | | | | | | | | | | |
| 勤勞教育(Labor Education) | 0 | 0.5 | 0 | 0.5 | | | | | | | | | | | | | | | |
| 工讀實務實習(一)-(四)(Practical Training Curriculum) | | | | | | | | | | | | 12 | | | | | | | |
| 工讀自學英文(Self-Study English During Vocational Practice) | | | | | | | | | | | | 2 | | | | | | | |
| 合計 | 1 | 2.5 | 1 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | | |
| 校共同必修 | | | | | | | | | | | | | | | | | | | |
| 普通化學實驗(General Chemistry Experiment) | 1 | 3 | 1 | 3 | | | | | | | | | | | | | | | |
| 微積分(Calculus) | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | |
| 普通物理(General Physics) | 3 | 3 | | | | | | | | | | | | | | | | | |
| 普通化學(General Chemistry) | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | |
| 化工叢論(Assorted Miniature Courses of Chemical Engineering) | | | | | 1 | 2 | | | | | | | | | | | | | |
| 有機化學(Organic Chemistry) | | | | | 3 | 3 | 3 | 3 | | | | | | | | | | | |
| 質能平衡(Material and Energy Balance) | | | | | 3 | 3 | | | | | | | | | | | | | |
| 物理化學(Physical Chemistry) | | | | | 3 | 3 | 3 | 3 | | | | | | | | | | | |
| 工程數學(Engineering Mathematics) | | | | | 3 | 3 | 3 | 3 | | | | | | | | | | | |
| 有機化學實驗(Organic Chemistry Experiment) | | | | | 1 | 3 | | | | | | | | | | | | | |
| 單元操作與輸送現象(I)-(III)(Unit Operation and Transport Phenomena I-III) | | | | | 3 | 3 | 3 | 3 | | | | 3 | 3 | | | | | | |
| 物理化學實驗(Physical Chemistry Experiment) | | | | | | | 1 | 3 | | | | | | | | | | | |
| (化工熱力學(Chemical Engineering Thermodynamics)) | | | | | | | 3 | 3 | | | | | | | | | | | |
| 反應工程(Chemical Reaction Engineering) | | | | | | | | | 3 | 3 | | | | | | | | | |
| 程序設計(Process Design) | | | | | | | | | | | | | | 3 | 3 | | | | |
| 實務專題(I)(II)(Special Topics in Practice, (I) (II)) | | | | | | | | | | | | 1 | 3 | 1 | 3 | | | | |
| 化學工程實習(III)(Practice for Chemical Engineering, I-II) | | | | | | | | | | | | | 1 | 4 | 1 | 4 | | | |
| 工程倫理與實務講座(Engineering Ethics and Professional Topics) | | | | | | | | | | | | 1 | 3 | | | | | | |
| 合計 | 10 | 12 | 7 | 9 | 13 | 14 | 13 | 15 | 7 | 9 | 0 | 0 | 9 | 16 | 5 | 10 | | 64 | |
| 專業必修 | | | | | | | | | | | | | | | | | | | |
| 計算機程式(Computer Program) | 3 | 3 | | | | | | | | | | | | | | | | | |
| 材料科學導論(Introduction to Material Science) | | | 3 | 3 | | | | | | | | | | | | | | | 學程課程 |
| 分析化學實驗(Analytical Chemistry and Experiment) | | | 3 | 4 | | | | | | | | | | | | | | | |
| 高分子化學(Polymer chemistry) | | | | | 3 | 3 | | | | | | | | | | | | | 學程課程 |
| 生物化學(Biochemistry) | | | | | 3 | 3 | | | | | | | | | | | | | 生化工程或生物技術必選 |
| 分子生物學(Molecular Biology) | | | | | 3 | 3 | | | | | | | | | | | | | 生化工程或生物技術必選 |
| 化學技術實習(Chemical Technology in Practice) | | | | | 1 | 4 | | | | | | | | | | | | | 未獲乙級化學證照同學必選 |
| 高分子實驗(Polymer Experiment) | | | | | | | 1 | 3 | | | | | | | | | | | |
| 儀器分析(Instrumental Analysis) | | | | | | | 3 | 3 | | | | | | | | | | | 儀器分析實驗必選 |
| 高分子加工製實驗(Polymer Processing and Experiment) | | | | | | | 3 | 4 | | | | | | | | | | | 材料系跨領域學程課程 |
| 合成化學(Synthetic Chemistry) | | | | | | | 3 | 3 | | | | | | | | | | | 合成化學實驗必選 |
| 公用設施(Utility Installations) | | | | | | | | | 3 | 3 | | | | | | | | | |
| 電化學(Electrochemistry) | | | | | | | | | 3 | 3 | | | | | | | | | 學程課程 |
| 儀器分析實驗(Instrumental Analysis Experiment) | | | | | | | | | 1 | 3 | | | | | | | | | |
| 合成化學實驗(Synthetic Chemistry Experiment) | | | | | | | | | 1 | 3 | | | | | | | | | |
| 化工裝置設計(Equipment Design in Chemical Engineering) | | | | | | | | | | | | 3 | 3 | | | | | | |
| 奈米觸媒技術與應用(Nanocatalytic technology and application) | | | | | | | | | | | | 3 | 3 | | | | | | 學程課程;環安衛與材料系跨領域學程課程 |
| 數值分析(Numerical Analysis) | | | | | | | | | | | | 3 | 3 | | | | | | |
| 生化工程(Biochemical Engineering) | | | | | | | | | | | | 3 | 3 | | | | | | |
| 少化工程序與安全(Chemical Processing and Safety) | | | | | | | | | | | | 3 | 3 | | | | | | 學程課程 |
| 程序控制(Process Control) | | | | | | | | | | | | 3 | 3 | | | | | | |
| 生物技術(Biotechnology) | | | | | | | | | | | | | | 3 | 3 | | | | |
| 奈米材料與技術(Nanomaterial and Technology) | | | | | | | | | | | | | | 3 | 3 | | | | 學程課程 |
| 計算機化工應用(Computer Application in Chemical Engineering) | | | | | | | | | | | | | | 3 | 3 | | | | 專員備數值分析之知能 |
| 電路板與半導體製作(Fabrication of Semiconductor and PCB) | | | | | | | | | | | | | | 3 | 3 | | | | 環安衛系、材料系跨領域學程課程 |
| 綠色化學技術實驗(Green Chemistry Technology and Experiment) | | | | | | | | | | | | | | 3 | 3 | | | | 學程課程 |
| 合計 | 3 | 3 | 6 | 7 | 10 | 13 | 10 | 13 | 8 | 12 | 0 | 0 | 18 | 18 | 15 | 15 | | 73 | |
| 院共同選修 | | | | | | | | | | | | | | | | | | | |
| 綠色奈米資源學程實務專題(Special topic on green-, nano-, resource- technological program) | 1 | 3 | 1 | 3 | | | | | | | | | | | | | | | 學程課程 |
| 綠色奈米資源學程實務專題討論(Discussion on green-, nano-, resource- technological program) | | | | | | | | | | | | | 1 | 3 | | | | | 學程課程 |
| 合計 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | | 3 | |
| 選修 | | | | | | | | | | | | | | | | | | | |
| 綠色化學技術叢論(Green Chemistry Technology Forum) | | | | | | | | | | | | 3 | 3 | | | | | | 遠距教學、學程課程(化工系開課) |
| 環境與資源工程(Environmental and Resources Engineering) | | | | | | | | | | | | 3 | 3 | | | | | | 環安衛系學生不得選修、第1階段 |
| 綠色生產力(Green Productivity) | | | | | | | | | | | | 3 | 3 | | | | | | 遠安衛系學生不得選修、第2階段 |
| 品質工程(Quality Engineering) | | | | | | | | | | | | 3 | 3 | | | | | | 遠安衛系學生不得選修、第1階段 |
| 電漿與薄膜科技(Plasma and thin film technology) | | | | | | | | | | | | 3 | 3 | | | | | | 材料系學生不得選修、第2階段 |
| 綠色能源概論(Introduction to Green Energy) | | | | | | | | | | | | | 3 | 3 | | | | | 遠距教學、學程課程(材料系開課) |
| 資源回收(Resource Recovery) | | | | | | | | | | | | 3 | 3 | | | | | | 學程課程(環安衛系開課) |
| 再生能源材料(Materials for Renewable Energy Generation) | | | | | | | | | | | | 3 | 3 | | | | | | 學程課程(環安衛系開課) |
| 合計 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 21 | 21 | 3 | 3 | 3 | 3 | | | |

1 畢業至少應修 142 學分。
2 二下必修「工讀實務實習(一)-(四)」及「工讀自學英文」，共 14 學分。
3 共同必修 22 學分(含基礎課程及核心課程)，專業必修至少 8 學分(四級型至少 2 學分)，專業必修至少修 26 學分(開設 76 學分)，一般選修(可跨系)至少修 8 學分。
4 每學期選課上修時 27 學分，一至二年級不得少於 16 學分，三至四年級不得少於 9 學分。
5 二上課程每週以 4/3 倍時數上課，以補足總數。