

吳鳳科技大學 日間部 日四技 電機工程系 課程表 (112學年度入學學生適用)

The Curriculum Framework for the Four-Year Bachelor Program of the Department of Electrical Engineering at WuFeng University for the 112 Academic Year

| 科目類別 (Categorical Courses) | 第一學年(First Academic Year) | | | | | | 第二學年(Second Academic Year) | | | | | | 第三學年(Third Academic Year) | | | | | | 第四學年(Fourth Academic Year) | | | | | | 小計 subtotal | | |
|---|---|---|---------|---|---|---------|---|--|---------|---|--|---------|---|--|---------|---------------------------------|---|---------|---|---|---------|--------------------|-----------|---------|-------------|---------|-----|
| | 上(First Semester) | | | 下(Second Semester) | | | 上(First Semester) | | | 下(Second Semester) | | | 上(First Semester) | | | 下(Second Semester) | | | 上(First Semester) | | | 下(Second Semester) | | | 學分 Credit | 時數 Hour | |
| | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | 科目 Course Title | 學分 Credit | 時數 Hour | | | |
| 基本素養 (Basic Literacy) | 英文(一) English (I) | 3 | 3 | 英文(二) English (II) | 3 | 3 | 安全教育 Safe Education | 1 | 1 | | | | | | | | | | | | | | | | | | |
| | 文學賞析與習作 Chinese Literature Appreciate | 2 | 2 | 華文能力表達 The Ability of Expression in Chinese Language | 2 | 2 | 專業倫理 Professional Ethics | 1 | 1 | | | | | | | | | | | | | | | | | | |
| | 體育(一) Physical Education (I) | 2 | 2 | 體育(二) Physical Education (II) | 2 | 2 | 創意發明與智慧財產 Introduction to Originality and IPR | 1 | 1 | | | | | | | | | | | | | | | | | | |
| | 勞作教育 Practical Training Education | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 小計/subtotal | 8 | 8 | | 7 | 7 | | 3 | 3 | | 0 | 0 | | | 0 | 0 | | | 0 | 0 | | | 0 | 0 | 18 | 18 | |
| 公民素養 (Civic Literacy) | | | | | | | 公民素養(一) Civic Literacy (I) | 2 | 2 | 公民素養(二) Civic Literacy (II) | 2 | 2 | | | | | | | | | | | | | | | |
| | 小計/subtotal | 0 | 0 | | 0 | 0 | | 2 | 2 | | 2 | 2 | | | 0 | 0 | | | 0 | 0 | | | 0 | 0 | 4 | 4 | |
| 院共同必修 (Courses required by the college) | 微積分 Calculus | 2 | 2 | 計算機概論* Introduction to Computer | 2 | 3 | 創意發明與智慧財產 Creativity and Intellectual Property | 2 | 2 | | | | | | | | | | | | | | | | | | |
| | 小計/subtotal | 2 | 2 | | 2 | 3 | | 0 | 0 | | 2 | 2 | | | 0 | 0 | | | 0 | 0 | | | 0 | 0 | 6 | 7 | |
| 專業必修 (Courses required by the department) | 邏輯設計與實習* Logic Design and Laboratory | 3 | 3 | 機電整合初論* Fundamentals of Mechatronics | 3 | 3 | 工程數學 Engineering Mathematics | 3 | 3 | 電子學(二) Electronics (II) | 3 | 3 | 電機機械實習 Laboratory of Electric Machinery | 1 | 3 | 自動控制 Automatic Control | 3 | 3 | 實務專題(二) Special Projects (II) | 2 | 2 | | | | | | |
| | 電路學與實習(一) Electric Circuit and Laboratory (I) | 3 | 4 | 電路學與實習(二) Electric Circuit and Laboratory (II) | 3 | 4 | 電子學(一) Electronics (I) | 3 | 3 | 電子實習(一) Laboratory of Electronics (I) | 1 | 3 | 電子實習(二) Laboratory of Electronics (II) | 1 | 3 | 實務專題(一) Special Projects (I) | 2 | 2 | | | | | | | | | |
| | 工程圖學* Engineering Drawing | 3 | 3 | | | | 程式設計* Programming Language | 3 | 3 | 電機機械 Electric Machinery | 3 | 3 | 微處理器與實習* Microprocessor and Laboratory | 3 | 3 | | | | | | | | | | | | |
| | | | | | | | 可程式控制器程式設計* PLC Programming | 1 | 3 | | | | | | | | | | | | | | | | | | |
| | 小計/subtotal | 9 | 10 | | 6 | 7 | | 10 | 12 | | 7 | 9 | | 5 | 9 | | 5 | 5 | | 2 | 2 | | | 0 | 0 | 44 | 54 |
| 必修小計/Subtotal, Compulsory | 19 | 20 | | 15 | 17 | | 13 | 15 | | 11 | 13 | | 7 | 11 | | 5 | 5 | | 2 | 2 | | | 0 | 0 | 72 | 83 | |
| 專業選修 (Elective courses of the department) | 智慧科技 (Smart Technology) | 電器修護實習 Electric Repairing Practices | 3 | 3 | 機電整合實務* Mechatronic Practices | 3 | 3 | 電動機控制實習* Motor Control Practices | 3 | 3 | 自動化驅動實習* Automation and Drives Practices | 3 | 3 | 人機介面實務* Human Machine Interface Practices | 3 | 3 | PC-based馬達控制實習* PC-based Motor Control | 3 | 3 | 機器視覺與影像處理* Machine Vision and Image Processing | 3 | 3 | | | | | |
| | | 自來水管配管實習 Water Supply Piping Practices | 3 | 3 | 電腦輔助電工與機械製圖* Computer Aided Electrical and Mechanical Design | 3 | 3 | 電路板設計實習* Circuit Board Design Practices | 3 | 3 | 自動控制模組實習* Automatic Control Module Practices | 3 | 3 | 電子電路分析與模擬* Electronic Circuit Analysis and Simulation | 3 | 3 | EtherCAT馬達伺服控制實習* EtherCAT Servo Motor Control Practices | 3 | 3 | 工業節能與安全實務* Industrial Energy Conservation and Safety Practices | 3 | 3 | | | | | |
| | | | | | 機構學 Mechanism | 3 | 3 | 室內配線實習(一) Commercial Wiring Practices (I) | 3 | 3 | 機電整合進階應用* Advanced Practices of Mechatronics | 3 | 3 | 工業配線實務(二) Industrial Wiring Practices (II) | 3 | 3 | 綠色能源工程 Green Energy Engineering | 3 | 3 | 風力發電技術 Wind Power Generation Technology | 3 | 3 | | | | | |
| | | | | | 工廠管理 Factory Management | 3 | 3 | 工業配線實務(一) Industrial Wiring Practices (I) | 3 | 3 | 工業安全衛生法規 Industrial Safety and Sanitation Regulations | 3 | 3 | 電力系統概論 Introduction to Power System | 3 | 3 | 建物照明與節能控制 Building Lighting and Energy Saving Control | 3 | 3 | 冷凍空調設計與應用 Air Conditioning Design and Application | 3 | 3 | | | | | |
| | | | | | | | | 工業安全衛生法規 Industrial Safety and Sanitation Regulations | 3 | 3 | 室內配線實習(二) Commercial Wiring Practices (II) | 3 | 3 | 電力電子學實務 Power Electronics Theory and Practices | 3 | 3 | 用電設備檢核與維護 Power Consuming Equipment Inspecting and Maintenance | 3 | 3 | 電動車輛實習 Electric Vehicle Driving Practices | 3 | 3 | | | | | |
| | 雲端介面技術 (Cloud Interface Technology) | 工業4.0概論 Concept of Industry 4.0 | 3 | 3 | 感測元件應用* Applications of Sensing Element | 3 | 3 | 圖程式與自動量測* Graphical Programming and Automatic Measurement | 3 | 3 | 綠能智慧建築控制技術 Green Energy Intelligent Building Control Technology | 3 | 3 | 電控虛實整合實務* Cyber-Physical System Practices on automation | 3 | 3 | 大數據分析* Big Data Analysis | 3 | 3 | 工業物聯網* Industrial Internet of Things | 3 | 3 | | | | | |
| | | 電腦硬體維修* Computer Maintenance | 3 | 3 | 網路概論 Introduction to Network | 3 | 3 | | | 嵌入式系統概論* Introduction to Embedded System | 3 | 3 | 機聯網感測器實務* Practices on Industry Inernet of Machine Supervision | 3 | 3 | 網路安全* Network Security | 3 | 3 | 人工智慧概論* Introduction to Artificial Intelligence | 3 | 3 | | | | | | |
| | | | | | | | | | | | | | 智慧型機器人應用實務* Innovative Robot Control Practices | 3 | 3 | | | | 智慧物聯網應用實務* Intelligent IoT Application Practices | 3 | 3 | | | | | | |
| | | | | | | | | | | | | | 網路架設實務 Network Installation Practices | 3 | 3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 該學期至少需選修學分/學時 minimum elective credits required for the semester | | 0 | 0 | | 3 | 3 | | 3 | 3 | | 6 | 6 | | 9 | 9 | | 9 | 9 | | 9 | 9 | | | 9 | 9 | 48 | 48 |
| 學分/學時小計 Subtotal, Credits/Hour | | 19 | 20 | | 18 | 20 | | 16 | 18 | | 17 | 19 | | 16 | 20 | | 14 | 14 | | 11 | 11 | | | 9 | 9 | 120 | 131 |
| 潛能課程: Potential courses: up to 25 credits | 1. 通識選修: 最多4學分 2. General Education Learning Passport: Up to 4 credits 2. 社團發展: 最多6學分 3. Club Development: Up to 6 credits 3. 證照專利: 最多6學分 4. Certificate and Patent: up to 6 credits 4. 競賽展演: 最多6學分 5. Competition and Performance: up to 6 credits 5. 學程與跨系興趣選修: 最多為本類課程應修學分 6. Course and interdepartmental interest electives: up to credits required for this type of courses 6. 校外實習: 最多21學分 7. Field Practice: Up to 21 credits 7. 潛能課程相關課程詳細規定請參閱「吳鳳科技大學潛能課程修課要點」辦理。 7. Please refer to "Key Points of Potential Courses of Wufeng University of Science and Technology" for detailed requirements of Potential Courses. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 學程/潛能課程修課學分建議 | 0 | 0 | | 0 | 0 | | 3 | 3 | | 2 | 2 | | 3 | 3 | | 0 | 0 | | 0 | 0 | | | 0 | 0 | 8 | 8 | |
| 畢業最低學分/學時 Total Number of Required Credits/Hour | | 19 | 20 | | 18 | 20 | | 19 | 21 | | 19 | 21 | | 19 | 23 | | 14 | 14 | | 11 | 11 | | | 9 | 9 | 128 | 139 |
| 共同選修 Common Elective | 1. 「全民國防教育軍事訓練」課程有五大領域：(一)國際情勢 (二)國防政策 (三)全民國防 (四)防衛動員 (五)國防科技。 2. 各領域均為0學分/2學時，可折抵假期，各領域每學期開設情況，均依當學期教務處公告為準。 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 備註/Notes: | 一、校基本素養/Basic requirements of the university: 1. 語言能力門檻: 依據「吳鳳科技大學學生英文能力專業門檻實施要點」相關規定辦理。 Language Proficiency Threshold: It shall be handled according to the implementation of "Wufeng University Students' English Proficiency Requirements for Graduation Threshold." 2. 資訊能力門檻: 依據「吳鳳科技大學學生資訊能力專業門檻實施要點」，非資訊系(科)至少通過一種資訊基本能力認證測驗；資訊系(科)至少需通過兩種資訊能力認證測驗。 Information Capability Threshold: According to the implementation of "Wufeng University students' information capability requirements for graduation threshold." Students of non-information departments (sections) must pass at least one basic information proficiency certification test. Students of the information department must pass at least two information proficiency certification tests. 二、院基本素養/Basic requirements of the college: 1. 學院必修科目為: 微積分、計算機概論、創意發明與智慧財產。學生必須修習及格。 The compulsory subjects of the colleges: Calculus, Introduction to Computer, Creativity and Intellectual Property Right. Students must pass these courses. 三、系所基本素養/Basic requirements of the department: 1. 畢業學分數要求: 至少需取得128學分方可畢業，其中包含(1)基本素養科目18學分(2)公民素養科目4學分(3)學院共同必修6學分(4)專業必修科目44學分(5)專業選修科目48學分(6)學程、跨系興趣選修與潛能課程8學分。 Graduation credit requirements: At least 128 credits, including (1) Basic Literacy Courses: 18 credits (2) Civic Literacy Courses: 4 credits (3) The common compulsory subjects of the colleges: 6 credits (4) Professional compulsory courses: 44 credits (5) Professional elective courses: 30 credits (6) A maximum of 25 credits are recognized for courses, interdepartmental interest electives and potential courses (excluding off-campus internships). 2. 各年級各學期修習學分數規定: (1)一、二年級: 16-25學分、(2)三年級: 14-25學分、(3)四年級: 9-25學分。 Regulations on the number of credits for each grade and semester: (1) From first to second year: 16-25 credits. (2) Third year: 14-25 credits. (3) Fourth year: 9-25 credits. 3. 校外實習須符合「吳鳳科技大學學生校外實習課程實施要點」，以認定實習成績。 The Practical Training must meet the "Implementation of Wufeng University Students' Practical Training Course" to determine the internship results. 四、其他說明/Other remarks 1. *表示需使用電腦課程。 Indicates that a computer course is required. 2. 本系可因應計劃和產業需求修改選修課。 The department may modify elective courses according to the needs of the program and industry. 五、訂 (修) 定課程/Booking (Revised) History: 112.07.10電機工程系111學年度第2學期第3次課程委員會通過; 112.08.22安全工程學院112學年度第1學期第1次課程委員會通過; 112.09.05 112學年度第1學期第1次校課程委員會通過。 112/07/10 Department of Electrical Engineering 112 academic year 2nd semester; adopted by the Fire Science Curriculum Committee conference. 112/08/24 112 academic year 2nd semester, adopted by the College of Safety and Engineering Curriculum Committee conference. 112/09/05 112 academic year 1st semester, adopted by the 1st Curriculum Committee conference. | | | | | | | | | | | | | | | | | | | | | | | | | | |