**電機資訊科技Computer Science全英語學程**

**108學年度2019 Fall入學學生必修科目、學分數暨畢業總學分表**

**\*此總學分表非最終版本，仍須經過校課委會審核通過。**

**\*Please note that this is NOT the final list of courses and credits.**

**It is subject to review by the School Curriculum Committee.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 類別Type | 科 目 名 稱Courses | | 學分數Credits | | 備 註Remarks |
| 上學期  1st Sem | 下學期 2nd Sem |
| 校  定  必  修  ︵  30  學  分  ︶  Compulsory  ︵  30  Credits  ︶ | 華語 Chinese | | 2 | |  |
| 英文/華語或外語領域English/Chinese or Foreign Language | | 8 | | 英語能力檢定通過者，得選修華語或其他外語6學分 Students who pass the English proficiency test can take Chinese or other languages courses |
| 通識課程General  Education Course | 核心通識  Core General | 8-12 | | 任選4門課程（如無英語授課課程時得選修通識選修課程）可由本系自開部分課程抵免。 Students can choose four courses (it there are no English-taught courses, students can choose to take elective courses or courses given by this department) |
| 選修科目  Elective Course | 8-12 | | 社會科學領域及人文學領域至少各2學分，可由本系自開部分課程抵免。 At least two credits from social science fields and at least two credits from humanities fields. Students could also take courses given by this department |
| 合 計Total | 20 | |  |
| 體育Physical Education | | 0 | | 1至3年級必修 A required course for freshmen to juniors |
| 服務學習Student Service | | 0 | | 畢業前必修60小時  60 hours required before graduation |
| 操行Conduct | |  | | 每學期成績及格  Will be graded each term |
| 基  礎  課  程  ︵  任  選  24  學  分  ︶  Basic Core  Course  ︵  24  Credits  ︶ | 微積分(一)  Calculus (I) | 微積分(二)  Calculus (I I) | 3 | 3 |  |
| 普通物理(一)  General Physics (I) | 普通物理(二)  General Physics(I I) | 3 | 3 | 偏重資訊專長同學得免修 Students with computer science specialty can waive these courses |
| 普通物理實驗一  General Physics Laboratory (I) | | 1 |  |
| 計算機概論Introduction to Computer Science | | 3 | 3 |  |
| 計算機程式設計  Introduction to Programming | | 3 | |  |
| 邏輯設計Logic Design | | 3 | |  |
| 離散數學Discrete Mathematics | | 3 | |  |
| 常微分方程  Ordinary Differential Equations | | 3 | |  |
| 線性代數Linear Algebra | | 3 | |  |
| 機率Probability | | 3 | |  |
| 訊號與系統Signals and Systems | | 3 | |  |
| 實作專題一  Special Topic on Implementation (I) | | 1 | | 三年級下學期（與導師共同商訂） 2nd semester in the third year (Discuss with mentor) |
| 實作專題二  Special Topic on Implementation (II) | | 1 | | 四年級上學期（與導師共同商訂） 1st semester in the fourth year (Discuss with mentor |
| 核心選修  （任選 18學分）  Core Course（18 Credits） | 生命科學導論  Introduction to Life Science | | 3 | |  |
| 電子學Electronics | | 3 | |  |
| 電路學Electric Circuits | | 3 | |  |
| 電磁學Electromagnetism | | 3 | |  |
| 資料結構Data Structures | | 3 | |  |
| 暑期實習Summer Internship | | 3 | | (大二升大三暑修建議、與導師共同商訂) Students are suggested to take an internship during the summer vacation in the 2nd year. Discuss with mentor) |
| 計算機結構Computer Architecture | | 3 | |  |
| 計算機網路概論  Introduction to Computer Networks | | 3 | |  |
| 作業系統Operating Systems | | 3 | |  |
| 嵌入式系統與實驗  Embedded System Laboratory | | 3 | | 或其他專業選修課程 Or other specialty elective courses |
| 計算方法設計  Design and Analysis of Algorithms | | 3 | |  |
| 專  業  選  修  （30學分）  CoreElective  Course  （30Credits） | 進階課程與導師共同商訂 Students will discuss with their mentors before taking advanced courses | | 24 | | 電機資訊學院專業課程均可  與導師共同商訂之『非電機資訊』課程亦可 Students can choose courses given by the College of Electrical Engineering and Computer Science or can take other courses after discussing with their mentors |
| 實驗與導師共同商訂 Students will discuss with their mentors before taking advanced courses | | 6 | | 任選下列三門實驗課程：  邏輯設計實驗(硬體設計與實驗)、軟體設計與實驗、電子電路實驗、高等程式設計實作、數位訊號處理實驗、通訊系統實驗、電動機械實驗、光電實驗、固態電子實驗、積體電路設計實驗、計算機程式設計實作、嵌入式系統與實驗(與導師共同商訂之『非電機資訊』實驗課程或暑期實習亦可) Students can choose three lab courses from the following: Logic Design, Software Design, Electronics and Electric Circuits, Advanced Programming, Digital Signal Processing, Communication System, Electromechanical, Optoelectronic, Solid-state Electronics, Integrated Circuit Design, Computer Programming, Embedded Systems (Students can also take other lab courses or summer internships after discussing with their mentors) |
| 自由選修  (26學分)  Free  Elective  Course  （26 Credits） |  | |  | | 與導師共同商訂 Students will discuss with their mentors |
| 最低畢業總學分 Minimum Credits Needed for Graduation | | | 128 | |  |
| 備註 | 1.        中五學制學生畢業總學分應另增加12學分，詳細內容請洽詢國際班辦公室。 | | | | |