

清華學院國際學士班乙組電機資訊科技全英語學程
108 學年度入學學生必修科目、學分數暨畢業總學分表

類別 Type	科目名稱 Courses		學分數 Credits		備註 Remarks
			上學期 1 st Sem	下學期 2 nd 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 (II)	3	3	
	普通物理(一) General Physics (I)	普通物理(二) General Physics (II)	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） 2 nd 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） 1 st semester in the fourth year (Discuss with mentor)

類別 Type	科目名稱 Courses	學分數 Credits		備註 Remarks
		上學期 1 st Sem	下學期 2 nd Sem	
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 2 nd 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) Core Elective 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。			