

Department of Computer Science (CS + EE Program)

2018/2019 Academic Year (AY) (May 2018 Revision)

Required Courses for CS + EE Program											
Course Title	Required Credits	AY1		AY2		AY3		AY4		Remarks	
		Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring		
物理(一)(二) Physics (I)(II)	6	3	3							Pick 1 out of 3 (Note 1)	
普通生物(一)(二) General Biology (I)(II)											
化學(一)(二) Chemistry (I)(II)											
微積分(一)(二) Calculus(I)(II)	8	4	4								
線性代數 Linear Algebra	3	3									
計算機概論與程式設計 Intro. to Computers and Programming	3	3								(Note 2)	
資料結構與物件導向程式設計 Data Structures and Object-oriented Programming	3		3								
離散數學 Discrete Mathematics	3		3								
數位電路設計 Digital Circuit Design	3		3								
數位電路實驗 Digital Circuit Lab.	3			3							
演算法概論 Intro. to Algorithms	3			3							
作業系統概論 Intro. to Operating Systems	3					3					
計算機組織 Computer Organization	3				3						
資訊工程專題(一)(二) Computer Science and Engineering Projects(I)(II)	4						2	2			
微處理機系統實驗 Microprocessor System Lab.	3					3					
電路與電子學(一) Electrical Circuits and Electronics I	3			3							
編譯器設計概論 Intro. to Compiler Design	3					3					
訊號與系統 Signals and Systems	3				3						
嵌入式系統設計概論與實作 Introduction to Embedded Systems Design and Implementation	3						3				

生涯規劃及導師時間 Career Planning and Mentor's Hours	0	0	0							(Note 3)
服務學習(一) Service Learning I	0		0							
服務學習(二) Service Learning II	0			0						
資訊工程研討 Computer Science Seminars	0					0				
基礎程式設計 Basic Programming	0				0					Pass=Passing Basic Computer Programming Exam (Note 4)
學術倫理教育 Academic Ethics Education	0									(Note 5)
Total	60									

Graduation Requirements: 128 credits (English-medium courses: 8 credits).

Note 1: 60 credits (CS+EE Program) + 27 credits (Elective Professional Courses) + 11 credits (Free Elective Courses) = 98 credits (at least).

Note 2: Elective Professional Courses: all elective courses offered by the Dept. of CS (including elective courses in both undergraduate and graduate programs)

Note 3: Free Elective Courses: all elective courses offered by the Dept. of CS and other department (not including the courses of center of general education, Service Learning, Physical Education, Military Training office, health services).

1. Important prerequisite on course selection:

- (1) Pass the **Data Structures and Object-oriented Programming [Spring of AY 1]** before taking **Intro. to Algorithm [Fall of AY 2]**.
- (2) Pass the **Basic Programming [Spring of AY 2]** before taking
 - **Computer Science and Engineering Projects (I) [both Fall and Spring of AY 3]**
 - **Computer Science and Engineering Projects (II) [Spring of AY 3 and Fall of AY 4]**
 - **Intro. to Compiler Design [Fall of AY 3]**
 - **Intro. to Network Programming [Fall of AY 3]**
 - **Intro. to Computer Graphics [Fall of AY 3]**
- (3) Pass the **Computer Science and Engineering Projects (I) [both Fall and Spring of AY 3]** before taking **Computer Science and Engineering (II) [Spring of AY 3 and Fall of AY 4]**.

2. Students must complete one professional, English-medium course offered by the Department of CS.
(**Note: Projects or seminars are not included**)

Note 1: Students who complete “Physics (I) and (II)”, which are 8 credits in total, may waive 2 credits from Elective Professional Courses.

Note 2: Before entering the university, students who pass the “Basic Computer Programming Exam” with higher than 5 points can submit the application of credit exemption for “Intro. to Computers and Programming” (0 credit).

- Note 3: All the undergraduate freshmen are required to take “Mentor Hour” every semester (0 credits) and pass two courses before graduation.
- Note 4: To pass “Basic Programming”, students must pass the “Basic Computer Programming Exam”.
- Note 5: Students who fail the final test of “Academic Ethics Education” will not be issued the diploma. Please see “National Chiao Tung University Academic Ethics Education Program Implementation Rules” for details.
- Note 6: Students must take compulsory courses that are offered by the CS college. Students who failed compulsory courses must retake the same courses. Students may apply for an exception (retaking the same courses offered by other colleges at NCTU) by submitting Form I with their reasons indicated.
- Note 7: Students who choose to take professional, English-medium course offered by other colleges at NCTU must fill in and submit Form II for approval.