

**112th Academic year Tamkang university compulsory subjects for freshmen for the bachelor's degree
program of the Department of Computer Science and Information Engineering (English Taught Program)**

Course name		Credit	1 st year		2nd year		3rd year		4th year		5th year		Remark	
			1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
Fundamental courses (12 credits)	Foreign Language (Q)	8	2	2	2	2							Compulsory English course for freshman year and optional foreign language for sophomore year	
	Ability of Expressing in Spoken and Written Chinese	2											Ability of Expressing in Spoken and Written Chinese	
	Learning in University (N)	1	1										Learning and Development (N)	
	Learning and Practice of Club (K) *Holistic Education students please contact their departments.	1											1. Extracurricular activities and team development. 2. Team development is recognized as a compulsory credit of 1 credit for extracurricular activities and team development.	
General Education & Core Courses (14 credits)	AI and Programming Language	1	1											1.Each part from categories only can take up to 2 subjects for 4 credits. 2.Exploring and Implementing social issues is recognized as a compulsory course for 2 credits in social analysis.
	Exploring Sustainability	1	1											
	Classics in World Literature (L)	2											Humanity categories (At least 2 credits)	
	History and Culture (P)	2												
	Philosophy and Religion (V)	2												
	Arts Appreciation and Invention (M)	2												
	Global Outlook (T) *Holistic Education students please contact their departments.	2											Society categories (At least 2 credits)	
	Futures Studies (R)	2												
	Social Analysis (W) *Holistic Education students please contact their departments.	2												
	Civil Society And Participation (S)	2												
	Information & Computer Education (O)	2											Science categories	3. study abroad and international learning are recognized as 2 compulsory credits for Global Outlook
	Global Technology Revolution (Z)	2											(At least 2 credits)	

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			1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd		
	Natural Sciences (U)	2												
Other course	Physical Education	0	0	0	0	0								
	All-Out Defense Education Military Training and Nursing	0		0										
Campus And Community Service-Learning		0	0	0										
Exploring and Implementing Social Issues		2	1	1									It is a common compulsory subject in Holistic Education. It's recognized as Science Categories in General Core Courses for 2 credits. Recognition is limited to students from Holistic Education.	
Study Abroad and International Learning		2			2								It is a common compulsory subject in Holistic Education. It's recognized as Global Outlook in General Core Courses for 2 credits. Recognition is limited to students from Holistic Education.	
Team Development		1							0	1			It is a common compulsory subject in Holistic Education. It's recognized as Extracurricular Activities and Team Development in General Core Courses, academic year course, 1 st semester for 0 credit, 2 nd semester for 1 credit. Recognition is limited to students from Holistic Education.	

(1) Total credits of compulsory subjects: 77 credits (including 26 credits of general education courses)

(2) Minimum total number of credits required for elective courses in this department: 20 credits.

(3) Total credits of other elective courses: 31 credits

Total credits for graduation: 128 credits

**112th Academic year Tamkang university compulsory subjects for freshmen for the bachelor's degree
program of the Department of Computer Science and Information Engineering- English taught**

Course name	Credit	1st year		2nd year		3 rd year		4 th year		5 th year		Remark
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	
Discrete Mathematics	3	3										
Calculus	3	3										
Introduction To Computers	3	3										
Computer Programming	3	3										
Probability and Statistics	3		3									
Object Oriented Programming	3		3									
Linear Algebra	3			3								
Computer Organization	3			3								
Data Structures	3			3								
Introduction to Software Development	3			3								
Introduction To Computer Network	3				3							
Operating Systems	3				3							
Algorithms	3				3							
Database	3				3							
Open Source Practice	3				3							
Mathematics For Machine Learning	3							3				
Special Topics Lab.	3							3				
Junior Abroad	0							0				Junior students must go abroad for one academic year on his/her own expense. However, this one only applies on Taiwanese students but being optional for international and overseas Chinese students.

- (1) Total credits of compulsory subjects: 77 credits (including 26 credits of general education courses)
- (2) Minimum total number of credits required for elective courses in this department: 20 credits.
- (3) Total credits of other elective courses: 31 credits

Total credits for graduation: 128 credits

***Important matters:**

- 1. The course “Exploring and Implementing Social Issues” is not a compulsory subject for foreign students, but it can still be taken. It’s up to you. If not, you will have to take Social Analysis (W) categories courses.
- 2. The course” Study Abroad and International learning” is not a compulsory subject for foreign students, but it can still be taken. It’s up to you. If not, you will have to take Global Outlook (T) categories courses.
- 3. The course” Team Development” is not a compulsory subject for foreign students, but it can still be taken. It’s up to you. If not, you will have to finish the Learning and Practice of Club (K) plan.

Learning and Practice of Club (K):

A-Introductory courses (scheduled for the second semester of freshman year)+ B-Activity participation (participating in club activities)+ C-Activity execution (execution of community activities).