

**111th 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 <sup>st</sup> 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.  3.study abroad and international learning are recognized as 2 compulsory credits for Global Outlook
	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											Society categories (At least 2 credits)	
	Global Outlook (T) *Holistic Education students please contact their departments.	2												
	Futures Studies (R)	2												
	Social Analysis (W) *Holistic Education students please contact their departments.	2												
	Civil Society And Participation (S)	2											Science categories (At least 2 credits)	
	Information & Computer Education (O)	2												
	Global Technology Revolution (Z)	2												

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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	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 <sup>st</sup> semester for 0 credit, 2 <sup>nd</sup> 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**

**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	1st year		2nd year		3 <sup>rd</sup> year		4 <sup>th</sup> year		5 <sup>th</sup> 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.

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- (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).