

114 學年度入學新生課程規劃表

資訊工程學系全英語學士班

校訂必修(通識核心課程)

共計 24 學分

類別		課程/學門	學分	開課年級
基本知能 (12)	外國語文學門 (Q)	英文(一)	4	一
		大二外文自由選	4	二
	語文表達	中國語文能力表達	2	一下
	學習與發展(N)	大學學習	1	一上
	社團學習與實作(Q) *三全教育學生請另詢所屬學系	課外活動與團隊發展 團隊發展承認為課外活動與團隊發展必修1學分。	1	一下
通識核心課程 (12)	探索永續(必修)		1	一上
	人文領域 (3 選1 學門)	文學經典學門(L)	2	自行上網選修 1.每學門至多修習 2 科 2.社會議題探索暨實踐承認為社會分析學門必修2學分。 3.國際學習承認為全球視野學門必修2學分。
		歷史與文化學門(P)		
		哲學與宗教學門(V)		
		藝術欣賞與創作學門(M)		
	社會領域 (4 選1 學門)	全球視野學門(T) *三全教育學生請另詢所屬學系	2	
		未來學學門(R)		
		社會分析學門(W) *三全教育學生請另詢所屬學系		
		公民社會及參與學門(S)		
	科學領域 (3 選1 學門)	資訊教育學門(O)	2	
		全球科技革命學門(Z)		
		自然科學學門(U)		
全民國防教育軍事訓練 (一) -國防科技			(1)	不計入畢業學分
體育			(4)	不計入畢業學分
校園與社區服務學習			(2)	不計入畢業學分

系訂必修

共計79學分

科 目	學分	開課年級
離散數學	3	一
微積分	3	一
計算機概論	3	一
計算機程式語言	3	一
機率統計	3	一
物件導向程式設計	3	一
網路概論	3	一
線性代數	3	二
計算機組織	3	二
資料結構	3	二
軟體開發導論	3	二
機器學習數學	3	二
網路概論	3	二
作業系統	3	二
演算法	3	二
資料庫	3	二
開源軟體實務	3	二
專題實驗	3	四
專題實驗	3	四

系訂選修

19學分

科 目	學分	開課年級
進階程式設計	3	一
管理資訊系統	3	一
電腦模擬	3	二
統計學	2	二
電子商務	3	二
系統分析與設計	3	二
數值分析	2	二
企業資訊系統	2	二
網路應用設計	3	三
專利管理	3	三
雲端計算	3	三
人工智慧與專家系統導論	3	三
無線區域及個人網路	3	三
工程數學	3	三
進階C語言實務	3	三
資訊安全導論	3	三
物聯網概論	3	三
決策支援系統	3	四
資料分析(一)	3	四
軟體開發與專案管理	3	四
資料探勘	3	四
網路安全	2	四
人工智慧概論	2	四
大數據分析技法	3	四
數據科學實務：使用Python	3	四
人工智慧之深度計算入門	3	四
J A V A 程式設計	3	四
行動通訊安全	3	四
數位影像處專題	3	四
金融科技安全	3	四

◎系訂選修課程依當學期開課課程為主，以上列表僅供參考。

校 必 修： 24 學分  
系 必 修： 79 學分  
系 選 修： 19 學分  
自 由 選 修： 30學分

合計128 學分(★最低畢業學分數：128)

Department of Computer Science and Information Engineering (English Taught Program)

114 Academic Year Freshman Course Planning Table

School Compulsory Courses			24 Credits	
Field		Course Name	credit	Grade
Fundamental courses (12)	Foreign Language (Q)	English (I)	4	1 <sup>st</sup> year
		optional foreign language for sophomore year	4	2nd year
	Ability of Expressing in Spoken and Written Chinese	Ability of Expressing in Spoken and Written Chinese	2	1 <sup>st</sup> year
	Learning and Development (N)	Learning in University	1	1 <sup>st</sup> year
	Learning and Practice of Club (K)	Extracurricular activities and team development.	1	1 <sup>st</sup> year
	*Holistic Education students please contact their departments.	Team development is recognized as a compulsory credit of 1 credit for extracurricular activities and team development.		
General Education & Core Courses (12)	Exploring Sustainability		1	1 <sup>st</sup> year
	Humanity categories	Classics in World Literature (L)	Humanity categories (At least 2 credits)	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
		History and Culture (P)		
		Philosophy and Religion (V)		
		Arts Appreciation and Invention (M)		
	Science categories	Global Outlook (T)	Society categories (At least 2 credits)	
		*Holistic Education students please contact their departments.		
		Futures Studies (R)		
		Social Analysis (W)		
	Science categories	*Holistic Education students please contact their departments.	Science categories (At least 2 credits)	
Civil Society And Participation (S)				
Information & Computer Education (O)				
All-Out Defense Education Military Training and Nursing			1	Not counted toward graduation credits.
Physical Education			4	Not counted toward graduation credits.
Campus And Community Service-Learning			2	Not counted toward graduation credits.

Department Compulsory Courses			55 credits	
Course Name		credit	Grade	
Discrete Mathematics		3	1 <sup>st</sup> year	
Calculus		3	1 <sup>st</sup> year	
Introduction To Computers		3	1 <sup>st</sup> year	
Computer Programming		3	1 <sup>st</sup> year	
Probability and Statistics		3	1 <sup>st</sup> year	
Object Oriented Programming		3	1 <sup>st</sup> year	
Introduction To Computer Network		3	1 <sup>st</sup> year	
Linear Algebra		3	2nd year	
Computer Organization		3	2nd year	
Data Structures		3	2nd year	
Introduction to Software Development		3	2nd year	
Mathematics For Machine Learning		3	2nd year	
Operating Systems		3	2nd year	
Algorithms		3	2nd year	
Database		3	2nd year	
Open Source Practice		3	2nd year	
Artificial Intelligence		2	4th year	
Information Security		2	4th year	
Special Topics Lab.		3	4th year	
Junior Abroad		0	4th year	

Department Elective Courses			19 Credits	
Course Name		credit	Grade	
Advanced Computer Programming		3	1 <sup>st</sup> year	
Management Information System		3	1 <sup>st</sup> year	
Computer Simulation		3	2nd year	
Statistics		3	2nd year	
Electronic Commerce		3	2nd year	
Numerical Analysis		2	2nd year	
System Analysis And Design		3	2nd year	
Enterprise Information System		3	2nd year	
Network-Based Application Design		3	3rd year	
Patent Management		3	3rd year	
Introduction To Information Security		3	3rd year	
Introduction To Artificial Intelligence And Expert Systems		3	3rd year	
Introduction To Internet Of Things		3	3rd year	
Cloud Computing		3	3rd year	
Network Security		3	3rd year	
Wireless Local Area Networks		3	3rd year	
Engineering Mathematics		3	3rd year	
Advanced C Programming		3	3rd year	
Decision Support Systems		3	4th year	
Data Analysis I		3	4th year	
Data Mining		3	4th year	
Software Development And Project Management		3	4th year	
Introduction To Artificial Intelligence		3	4th year	
Big Data Analytic Techniques		3	4th year	
Practical Data Science On Python		3	4th year	
Introduction To Deep Computing In Artificial Intelligence		3	4th year	
Java Programming		3	4th year	
Mobile Communications Security		3	4th year	
Digital Image Processing Project		3	4th year	
Fintech Security		3	4th year	

◎ The department elective courses are mainly based on the courses offered in the current semester. The above list is for reference only. °

- ( 1 ) Total credits of compulsory subjects: 79 credits (including 24 credits of general education courses)
- ( 2 ) Minimum total number of credits required for elective courses in this department: 19 credits.
- ( 3 ) Total credits of other elective courses: 30 credits
- ( 4 ) Programming Examination
- 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).