資訊工程學系
114 學年度入學新生課程規劃表

校訂必修(通識核心課程)　　　　　　　**共計26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(K)	課外活動與團隊發展	1	一下
通識核心課程(12)	**探索永續(必修)**		**1**	**一上**
	人文領域	文學經典學門(L)	2	每學門至多修習2科
		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	全球視野學門(T)	2	
		未來學學門(R)		
		社會分析學門(W)		
		公民社會及參與學門(S)		
	科學領域	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	

系訂必修　　　　　　　　　　　　**共計63學分**

科目名稱	學分數	開課年級
微積分	3	一
機率統計	3	一
計算機概論	3	一
數位系統導論	3	一
計算機實驗	1	一
邏輯設計實驗	1	一
程式語言(一)	4	一
程式語言(二)	4	一
統計學習	2	二
離散數學	3	二
線性代數	3	二
計算機組織	3	二
開源軟體實務	2	二
資訊系統實驗(一)	1	二
資訊系統實驗(二)	1	二
資料結構	3	二
演算法	3	二
資料庫	3	二
機器學習數學	3	三
人工智慧	2	三
作業系統	3	三
網路概論	3	三
資訊安全	2	三
專題實驗(一)	2	三
專題實驗(二)	2	三

系選修　　　　　　　　　　　　**11學分**

科目名稱	學分數	開課年級
知識商務	3	三
個人通訊系統	3	三
統計學	3	三
無線區域及個人網路	3	三
無線網路概論	3	三
無線區域網路	3	三
電子商務概論	3	三
機器學習概論	3	三
深度學習概論	3	三
工程數學	3	三
組合語言與系統程式	3	三
編譯程式	3	三
虛擬化技術	3	三
進階C語言實務	3	三
行動裝置程式設計	3	三
正規語言與自動機理論	3	四
雲端計算	3	四
多媒體處理技術	3	四
物件導向軟體工程	3	四
軟體專案管理	3	四
無線網路安全	3	四
資料探勘	3	四
管理資訊系統	3	四
網路安全	3	四
網路程式設計	3	四
影像處理	3	四
大數據分析技法	3	四
物聯網概論	3	四
數據科學實務：使用Python	3	四
物聯網安全	3	四
數位影像處專題	3	四
人工智慧之深度計算入門	3	四
資料壓縮	3	四
金融科技安全	3	四
資訊通訊安全管理	3	四
人工智慧與專家系統概論	3	四
決策支援系統	3	四
軟體開發與專案管理	3	四
系統分析與設計	3	四
ＪＡＶＡ程式設計	3	四
進階程式設計	3	四
企業系統開發實境	3	四
行動通訊安全	3	四
企業資訊系統	3	四
企業應用實務	5	四
專題講座	2	四
資訊與通訊科技發展	2	四

◎**系選修課程依當學期開課課程為主，以上列表僅供參考。**

```
校訂必修：    26 學分
系訂必修：    63 學分
系 選 修：    11學分
自由選修：    28 學分
程式能力檢定：  0學分
畢業總學分數：128學分
```

Department of Computer Science and Information Engineering
114 Academic Year Freshman Course Planning Table

School Compulsory Courses   26 Credits

Field		Course Name	credit	Grade
Fundamental courses (12)	Foreign Language (Q)	English (I)	4	1st 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	1st year
	Learning and Development (N)	Learning in University	1	1st year
	Learning and Practice of Club (K)	Learning and Practice of Club	1	1st year
General Education & Core Courses (12)	Exploring Sustainability		1	1st year
	humanities	Classics in World Literature (L)	2	Each part from categories only can take up to 2 subjects for 4 credits.
		History and Culture(P)		
		Philosophy and Religion (V)		
		Arts Appreciation and Invention (M)		
	Society and Culture	Global Outlook (T)	2	
		Futures Studies (R)		
		Social Analysis (W)		
		Civil Society and Participation (S)		
	Scientific Inquiry	Information & Computer Education (O)	2	
		Global Technology Revolution (Z)		
		Natural Sciences (U)		
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	

Department Compulsory Courses   63 credits

Course Name	credit	Grade
Calculus	3	1st year
Probability And Statistics	3	1st year
Introduction to Computers	3	1st year
Digital Systems	3	1st year
Computer Experiments	1	1st year
Logic Design Laboratory	1	1st year
Computer Programming I	4	1st year
Computer Programming II	4	1st year
An Introduction to Statistical Learning	2	2nd year
Discrete Mathematics	3	2nd year
Linear Algebra	3	2nd year
Computer Organization	3	2nd year
Open Source Practice	2	2nd year
Information System Laboratory I	1	2nd year
Information System Laboratory II	1	2nd year
Data Structures	3	2nd year
Algorithms	3	2nd year
Database	3	2nd year
Mathematics For Machine Learning	3	3rd year
Artificial Intelligence	2	3rd year
Operating Systems	3	3rd year
Introduction To Computer Network	3	3rd year
Information Security	2	3rd year
Special Topics Lab.(I)	2	3rd year
Special Topics Lab.(Ii)	2	3rd year

Department Elective Courses   11 Credits

Course Name	credit	Grade
Knowledge Commerce	3	3rd year
Personal Communication Systems	3	3rd year
Statistics	3	3rd year
Wireless Lans and Pans	3	3rd year
Introduction Of Wireless Lan	3	3rd year
Wireless Local Area Networks	3	3rd year
Introduction to E-Business	3	3rd year
Introduction to Machine Learning	3	3rd year
Introduction to Deep Learning	3	3rd year
Engineering Mathematics	3	3rd year
Assembly Language and System Programs	3	3rd year
Compilers	3	3rd year
Virtualization Technology	3	3rd year
Advanced C Programming	3	3rd year
Mobile Device Programming	3	3rd year
Formal Languages & Automata Theory	3	4th year
Cloud Computing	3	4th year
Multimedia Processing Technology	3	4th year
Object-Oriented Software Engineering	3	4th year
Software Project Management	3	4th year
Wireless Network Security	3	4th year
Data Mining	3	4th year
Management Information System	3	4th year
Network Security	3	4th year
Network Programming	3	4th year
Image Processing	3	4th year
Big Data Analytic Techniques	3	4th year
Introduction To Internet of Things *	3	4th year
Practical Data Science on Python	3	4th year
Security of The Internet of Things	3	4th year
Digital Image Processing Project	3	4th year
Introduction to Deep Computing In Artificial Intelligence	3	4th year
Data Compression	3	4th year
Fintech Security	3	4th year
Computer and Network Security	3	4th year
Introduction to Artificial Intelligence and Expert Systems	3	4th year
Decision Support Systems	3	4th year
Software Development and Project Management	3	4th year
System Analysis and Design	3	4th year
Java Programming	3	4th year
Advanced Computer Programming	3	4th year
Workshop Of Enterprise System Development	3	4th year
Mobile Communications Security	3	4th year
Enterprise Information System	3	4th year
Internship Of Enterprise	5	4th year
Seminar	2	4th year
The Trend Of Information Amd Communication Technologies	2	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: 89 credits (including 26 credits of general education courses)
（2）Minimum total number of credits required for elective courses in this department: 11 credits.
（3）Total credits of other elective courses: 28 credits
（4）Programming Examination
Total credits for graduation: 128 credits