


**國立東華大學**  
**教學計劃表 Syllabus**

課程名稱(中文) Course Name in Chinese	計算機結構		學年/學期 Academic Year/Semester	106/1
課程名稱(英文) Course Name in English	Computer Architecture			
科目代碼 Course Code	CSIEB0160	系級 Department & Year	學三	開課單位 Course-Offering Department
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)	3.0/3.0	
授課教師 Instructor	/紀新洲			
先修課程 Prerequisite				
課程描述 Course Description				
This course introduces organization of computer systems, including the design of modules and the integration of the modules. It also covers how to evaluate the performance of various architectures quantitatively. Recent advances of computer architecture will be also surveyed.				
課程目標 Course Objectives				
讓學生了解一個現代的 CPU 其內部架構為何，如何使速度更快、記憶體層次的觀念、輸出/入的影響，以及基本的平行架構。				
系專業能力 Basic Learning Outcomes				課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	資訊專業終身學習能力 Profound professional knowledge and skills			●
B	實驗驗證資訊科學能力 Sound and free spirit; simple and generous quality			○
C	資訊工具整合運用能力 Ability to appreciate beauty and think creatively			●
D	資訊系統應用設計開發能力 Sense of democracy, the rule of law, and civil responsibility			○
E	團隊合作溝通協調能力 Ability of communication, teamwork, and social practice			●
F	資通訊科技問題解決能力 Possess both domestic and global perspectives			○
G	瞭解資訊科技多元影響能力 Knowledgeable and possess the quality of humanism			○
H	肩負資訊社會責任能力 Ability of verbal expression and information organization and application			
圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated				
授課進度表 Teaching Schedule & Content				
週次 Week	內容 Subject/Topics			備註 Remarks
1	Course Overview			
2	Review on Instruction Set Architecture			
3	Datapath and Control			

4	Datapath and Contro	
5	Pipelining	
6	Pipelining	
7	Pipelining	
8	Memory Hierarch	
9	期中考試週 Midterm Exa	
10	Cache Design	
11	Cache Design	
12	Virtual Memory	
13	Virtual Memory	
14	Bus	
15	I/O and Interfacin	
16	I/O and Interfacing	
17	Advanced Processors	
18	期末考試週 Final Exam	

教 學 策 略 Teaching Strategies

- 課堂講授 Lecture     
  分組討論 Group Discussion     
  參觀實習 Field Trip  
 其他 Miscellaneous:

學期成績計算及多元評量方式 Grading & Assessments

配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績 General Performance	15%	✓							Quiz
期中考成績 Midterm Exam	35%	✓							
期末考成績 Final Exam	35%	✓							
作業成績 Homework and/or Assignments	10%		✓						
其他 Miscellaneous (Class Participation)	5%								Class attendance & participation

評量方式補充說明  
Grading & Assessments Supplemental instructions

教科書與參考書目 (書名、作者、書局、代理商、說明)  
Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

David Patterson and John Hennessy, Computer Organization & Design: The Hardware/Software Interface, Morgan Kaufmann

課程教材網址（教師個人網址請列在本校內之網址）  
Teaching Aids & Teacher's Website (Personal website can be listed here.)

e-Learning System

其他補充說明 (Supplemental instructions)