國立東華大學

教學計劃表　Syllabus

課程名稱(中文) Course Name in Chinese	計算機組織與組合語言			學年/學期 Academic Year/Semester		105/2
課程名稱(英文) Course Name in English	Computer Organization					
科目代碼 Course Code	CSIEB0140	系級 Department & Year	學二	開課單位 Course-Offering Department		資訊工程學系
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		3.0/3.0		
授課教師 Instructor	/楊茂村					
先修課程 Prerequisite						

課程描述　Course Description

This course covers the general organization of computers and the assembly language of MIPS instruction set. The class is instructed by lecturing and discussion. Students have chance to practice the assembly programming.

課程目標　Course Objectives

介紹計算機的基本組織與架構，使學生對於計算機系統的組成方式有一深入
的瞭解。

	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	肩負資訊人社會責任能力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	Introduction of Computer Organization	Chapter 1
2	Introduction of Computer Organization	Chapter 1
3	Performance	Chapter 1

4	Performance	Chapter 1
5	MIPS Instruction Set	Chapter 2
6	MIPS Instruction Set	Chapter 2
7	Arithmetic for Computers	Chapter 3
8	Arithmetic for Computers	Chapter 3
9	期中考試週 Midterm Exam	
10	Datapath	Chapter 4
11	Control	Chapter 4
12	Logic Design of the Processor	Chapter 4
13	Single Cycle Implementation	Chapter 4
14	Multiple Cycle Implementation	Chapter 4
15	Microprogramming	Chapter 4
16	80x86 Instruction Set	
17	80x86 Instruction Set	
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	10%	✓							Quiz
期中考成績 Midterm Exam	25%	✓							
期末考成績 Final Exam	25%	✓							
作業成績 Homework and/or Assignments	40%		✓						
其他 Miscellaneous (_____)									

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

Written homeworks should be submitted by paper.
Programming homeworks should be submitted through e-Learning@NDHU.
(http://www.elearn.ndhu.edu.tw/moodle/)

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.)
Textbook: Patterson & Hennessy. Computer Organization & Design: the Hardware/ Software Interface, Morgan Kaufmann, 5th Edition, 2013.(新月代理) Reference Book: Patterson & Hennessy. Computer Architecture: A Quantitative Approach, Morgan Kaufmann, 5th Edition, 2012.(新月代理) Stallings. Computer Organization and Architecture. 8th Edition, Prentice Hall, 2010. （高立代理）
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.)
其他補充說明 (Supplemental instructions)