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② 图 玄東 華 大 學									
教學計劃表 Syllabus									
課程名稱(中文) Course Name in Chinese	正規語言與自動機				學年/學期 Academic Year/Se	113/2			
課程名稱(英文) Course Name in English	Formal Languages and Automata								
科目代碼 Course Code	CSIEB0190	系級 Department 學三 & Year		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	/羅壽之								
先修課程 Prerequisite									
課程描述 Course Description									
To learn the different kinds of formal languages and automata such as regular and context-free languages, DFA, PDA, and Turing machines.									
課程目標 Course Objectives									
1. To study the grammar, computing model, and theory for formal languages. 2. To understand the basic of programming languages and computing models									
						٦	课程目標與系專業能		

	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Ability of lifetime learning in information profession	•
В	實驗驗證資訊科學能力Ability of validate experimental result validation in information science field	
С	資訊工具整合運用能力Ability of integrated applications of information technology	0
D	資訊系統應用設計開發能力Ability of information application system design and development	•
Е	團隊合作溝通協調能力Ability of teamwork, communication, and coordination	$\circ$
F	資通訊科技問題解決能力Ability of problem solving regarding information and communication technology	
G	瞭解資訊科技多元影響能力Ability to understand information technology's multiple influences	
Н	房負資訊人社會責任能力Ability of bearing the social responsibilities being among information professionals	

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	2/18 Chapter 1 The theory of computation	
2	2/25 Chapter 2 Finite automata	
3	3/4 Chapter 2 Finite automata	

4	3/11 Chapter 3 Regular languages and regular grammars					
5	3/18 Chapter 3 Regular languages and regular grammars					
6	3/25 Chapter 4 Properties of regular languages					
7	4/1 Chapter 5 Context-free languages					
8	4/8 Review test					
9	4/15 Midterm Exam					
10	4/22 Chapter 5 Context-free languages					
11	4/29 Chapter 6 Normal forms					
12	5/6 Chapter 7 Pushdown automata					
13	5/13 Chapter 7 Pushdown automata					
14	5/20 Chapter 8 Properties of context-free languages					
15	5/27 Chapter 9-10 Turing machines					
16	6/3 Chapter 11-14 Computation and Complexity					
17	6/10 Final Exam					
18	6/17 No class					
	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Mi	scellaneous:					
	教學創新自評 Teaching Self-Evaluation					
創新教學(	教学剧制自計Teaching Self-Evaluation Innovative Teaching)					
l						
問題導向學習(PBL)   團體合作學習(TBL)   解決導向學習(SBL)   翻轉教室 Flipped Classroom   磨課師 Moocs						
社會責任(Social Responsibility)						
在地實踐Community Practice                       產學合作 Industy-Academia Cooperation						
跨域合作(Transdisciplinary Projects)						
跨界教學Transdisciplinary Teaching 跨院系教學Inter-collegiate Teaching						
■ 業師合授 Courses Co-taught with Industry Practitioners						
其它 other:						

學期成績計算及多元評量方式 Grading & Assessments										
配分項目	配分比例 Percentage	多元評量方式 Assessments								
Items		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(含出缺席) General Performance (Attendance Record)	5%	<b>&gt;</b>								
期中考成績 Midterm Exam	30%	>								
期末考成績 Final Exam	30%	>								
作業成績 Homework and/or Assignments	35%	<b>~</b>								
其他 Miscellaneous										

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.)

An Introduction to Formal Languages and Automata, Peter Linz, 7ed

## 課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

https://elearn4.ndhu.edu.tw/moodle/

其他補充說明(Supplemental instructions)