

 國立東華大學
教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	電子電路學			學年/學期 Academic Year/Semester	114/1
課程名稱(英文) Course Name in English	Electric and Electronic Circuits				
科目代碼 Course Code	CSIEB0090	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	/張意政				
先修課程 Prerequisite					
課程描述 Course Description					
此課程介紹電路基本元件特性，如電阻、電容、電感、運算放大器等，同時也說明電路分析的方法，如節點分析、回路分析、暫態電路分析等，培養學生擁有基本電路設計的能力。 This course provides the learning of the characteristics of electronic components, e.g., resistors, capacitors, inductors, and operational amplifiers. The methods of circuit analysis are also introduced in the course, e.g., nodal analysis, loop analysis, and transient/steady-state circuit analysis.					
課程目標 Course Objectives					
1. Familiar with the characteristics of the electronic components. 2. Practice the methods for circuit analysis.. 3. Lay the foundation for a circuit designer					
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				●
B	實驗驗證資訊科學能力Ability of validate experimental result validation in information science field				○
C	資訊工具整合運用能力Ability of integrated applications of information technology				○
D	資訊系統應用設計開發能力Ability of information application system design and development				
E	團隊合作溝通協調能力Ability of teamwork, communication, and coordination				●
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				
H	肩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	Introduction to Electric and Electronic Circuits				

2	Basic Concept & Resistive Circuit	
3	Nodal Analysis Techniques	
4	Loop Analysis Techniques	
5	Additional Analysis Techniques	
6	Review & Quiz	
7	Thevenin's and Norton's Theorems I	
8	Thevenin's and Norton's Theorems II	
9	期中考試週 Midterm Exam	
10	Hand-on Practice	
11	Op Amps	
12	Capacitance and Inductance	
13	Transient Circuits I	
14	Transient Circuits II	
15	Review & Quiz	
16	Basic Semiconductor Electronic Circuits	
17	期末考試週 Final Exam	
18	Flexible curriculum & Self-directed learning	

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:

教學創新自評 Teaching Self-Evaluation

創新教學(Innovative Teaching)

- ☐ 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 Industry-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 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(含出缺席) General Performance (Attendance Record)	15%	✓	✓						
期中考成績 Midterm Exam	35%	✓							
期末考成績 Final Exam	35%	✓							
作業成績 Homework and/or Assignments	15%						✓		
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.) Textbook: Basic Engineering Circuit Analysis(12/e) J. David Irwin and R. Mark Nelms, Wiley 滄海圖書 Reference: Microelectronic Circuits 8/e, Sedra/Smith, Oxford University Press, USA.									
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.) Please visit http://www.elearn.ndhu.edu.tw/moodle/ to get the materials and information.									
其他補充說明 (Supplemental instructions)									