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# ②國玄東華大學

# 教學計劃表 Svllabus

教子可宣化 Oyliabuo							
課程名稱(中文) Course Name in Chinese	控制實驗				學年/學期 Academic Year/Semester		113/2
課程名稱(英文) Course Name in English	Control Laboratory						
科目代碼 Course Code	EE40100	系級 Department 學四 C & Year		開課單位 Course-Offering Department	電機工程學系		
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		1.0/			
授課教師 Instructor	/謝欣然						
先修課程 Prerequisite							
課程描述 Course Description							
Has Mottab/Cimulink asftware to simulate the control exetens, including the time responses and							

Use Matlab/Simulink software to simulate the control systems, including the time responses and frequency responses.

#### 課程目標 Course Objectives

#### 學習控制系統之電腦模擬方式及實際系統建構與感測器配置技術

	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	培育具備工程、應用數學與物理科學等數理知識之基本能力。To cultivate the basic knowledge of engineering, applied mathematics and physics	•
В	培育系統分析、模擬驗證、實作實現之能力。To cultivate the basic ability of analysis, verification and implementation of systems.	•
С	訓練軟體工具使用與硬體實務驗證相互輔助之能力。To train the auxiliary ability between the utilization of software tool and the verification of the hardware practice	•
D	訓練電機本知學能技術與工程實務相互結合運用之能力。To train the integrate ability between professional instinct in learning technique and engineering practice.	•
Е	落實專題製作之群體合作與團隊競爭之能力。To fulfill the ability of group cooperation and teamwork competition.	•
F	落實發掘問題、邏輯分析、克服瓶頸與持續學習之能力。To fulfill the ability of question finding, logical analyzing, bottleneck overcoming and continuous learning	•
G	了解學術倫理與智慧財產觀念,掌握產業更迭需求與具備多元專長之能力。To obtain the ability of multi-specialization and to meet the industry demand as well as to have the ability of academic ethics and concept of intellectual property	0
Н	了解國內外市場變化,具備基本科技英文閱讀溝通之能力。To understand the change of global market and the have the basic ability of reading and conversation in English.	0

# 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 the course content Grading rule and method	02/18
2	Introduction to Simulink	02/25

3	Analysis of control systems by Simulink I	03/04		
4	Analysis of control systems by Simulink II	03/11		
5	Simulink-based design of control systems I	03/18		
6	Simulink-based design of control systems II	03/25		
7	Simulink-based design of control systems III	04/01		
8	Control of electric motors I	04/08		
9	Suspended due to exam week	04/15		
10	Control of electric motors II	04/22		
11	Control of electric motors III	04/29		
12	Project work I	05/06		
13	Project work II	05/13		
14	Project work III	05/20		
15	Oral presentation I	05/27		
16	Oral presentation II	06/03		
17	Oral presentation III	06/10		
18	Summary to the lab	06/17		
	教 學 策 略 Teaching Strategies			
✓ 課堂講	授 Lecture	Field Trin		
		i iciu ii ip		
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其他Mi		Tieru iiip		
其他Mi 創新教學(	scellaneous: 教學創新自評Teaching Self-Evaluation			
」其他Mi 創新教學( ✓ 問題導	数學創新自評 Teaching Self-Evaluation Innovative Teaching)			
創新教學( ✓ 問題導 ■ 翻轉教	数學創新自評 Teaching Self-Evaluation  Innovative Teaching)  向學習(PBL)  ■ 團體合作學習(TBL)  ✓ 解決導向學			
創新教學(   別題導   翻轉教   社會責任(	数學創新自評 Teaching Self-Evaluation  Innovative Teaching)  向學習(PBL)  国體合作學習(TBL)  文解決導向基  室 Flipped Classroom  原課師 Moocs	學習(SBL)		
創新教學( > 問題導 計會責任(	数學創新自評 Teaching Self-Evaluation  Innovative Teaching)  向學習(PBL)  室 Flipped Classroom  「磨課師 Moocs  Social Responsibility)	學習(SBL)		
創新教學( > 問題導 社會責任( 在地實 跨域合作(	数學創新自評 Teaching Self-Evaluation  Innovative Teaching)  向學習(PBL)  室 Flipped Classroom  「磨課師 Moocs  Social Responsibility)   選Community Practice  産學合作 Industy-Academia Cooperat	學習(SBL) ion		
創新教學( 別新教學( 別期轉教 社會責任( 」跨域合作( 」跨界教	教學創新自評 Teaching Self-Evaluation  Innovative Teaching)  向學習(PBL)  室 Flipped Classroom  原課師 Moocs  Social Responsibility)  踐Community Practice  「産學合作 Industy-Academia Cooperat  Transdisciplinary Projects)  學Transdisciplinary Teaching  「跨院系教學Inter-collegiate Teaching	學習(SBL) ion		
創新教學( 別新教學( 別期轉教 社會責任( 」跨域合作( 」跨界教	数學創新自評 Teaching Self-Evaluation  Innovative Teaching)  向學習(PBL)  室 Flipped Classroom  「磨課師 Moocs  Social Responsibility)  踐Community Practice  「産學合作 Industy-Academia Cooperat  Transdisciplinary Projects)	學習(SBL) ion		
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學期成績計算及多元評量方式 Grading & Assessments										
配分項目	配分比例	多元評量方式 Assessments								
Items	Percentage	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)	20%									
期中考成績 Midterm Exam	30%									
期末考成績 Final Exam										
作業成績 Homework and/or Assignments	50%									
其他 Miscellaneous			A L IV							

評量方式補充說明

Grading & Assessments Supplemental instructions

experiment reports: 30%, general performance: 20%, project: 50%

### 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.)

Handout materials

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.)

其他補充說明(Supplemental instructions)