

## 99-1 大葉大學 完整版課綱

### 基本資訊

課程名稱	線性系統	科目序號 / 代號	0718 / EEI3004
開課系所	電機工程學系	學制 / 班級	大學日間部3年3班
任課教師	陳雍宗	專兼任別	專任
必選修 / 學分數	必修 / 3	畢業班 / 非畢業班	非畢業班
上課時段 / 地點	(一)2 / H540 (四)12 / H540	授課語言別	中文

### 課程簡介

This course is to provide an effective and efficient environment for students to learn the theory and problem-solving skills for linear systems. The material is designed to provide appropriate background to proceed into areas such as communications, control systems, digital filter design and signal processing and analog filter design. We use a computer-biased approach in which computer solutions and theory are viewed as mutually reinforcing rather than as an either-or proposition.

### 課程大綱

1. Signals and Sequences
2. Continuous Systems
3. Laplace Transforms and Application
4. Midterm
5. Frequency Response of Continuous Systems
6. Continuous-Time Fourier Series and Transforms
7. State-Space Topics for Continuous Systems
8. Matlab
8. Final Exam.

### 基本能力或先修課程

工數

### 課程與系所基本素養及核心能力之關連

- 3.1.蒐集資料、模擬分析、設計實驗及解決問題之能力
- 4.2.瞭解國內外電機相關產業的發展趨勢與脈動
- 4.3.充分認知專業倫理之重要性，瞭解工程技術對環境、社會及全球的影響，善盡工程師之社會責任

## 成績稽核

### 教科書(尊重智慧財產權，請用正版教科書，勿非法影印他人著作)

書名	作者	譯者	出版社	出版年
無參考教科書				

### 參考教材及專業期刊導讀(尊重智慧財產權，請用正版教科書，勿非法影印他人著作)

書名	作者	譯者	出版社	出版年
無參考教材及專業期刊導讀				

上課進度		分配時數(%)				
週次	教學內容	講授	示範	習作	實驗	其他
1	Introduction to the concept of linear system	100				
2	Continuous and discrete Systems	100				
3	Continuous and discrete Systems	80		20		
4	Continuous and discrete Systems	80		20		
5	Laplace transforms and applications	100				
6	Laplace transforms and applications	80		20		
7	Frequency response of continuous systems	100				
8	Frequency response of continuous systems	80		20		
9	middle test	100				
10	Continuous-time Fourier series and transforms	100				
11	Continuous-time Fourier series and transforms	100				
12	Continuous-time Fourier series and transforms	80		20		
13	State-space for continuous systems	100				
14	State-space for continuous systems	100				
15	State-space for continuous systems	80		20		
16	Discrete-time Fourier transforms	100				
17	Discrete-time Fourier transforms	80		20		
18	Final test	100				