

南台科技大學 98 學年度第 2 期課程資訊

課程名稱	數位信號處理
課程編碼	2BM01201
系所代碼	02
開課班級	碩電機國際一甲
開課教師	趙春棠
學分	3.0
時數	3
上課節次地點	一 6 7 8 教室 B304
必選修	選修
課程概述	All key concepts of Digital Signal Processing (DSP) are covered in the course. Practical problems will be presented and solved. Advanced applications of DSP for sound and images are also investigated.
課程目標	This course provides students with a basic understanding of Digital Signal Processing (DSP) including FIR and IIR systems. In addition, this course will introduce students to applications in audio and image processing problems as well as various engineering applications.
課程大綱	
英文大綱	<ol style="list-style-type: none"> 1. Crash Course in Digital Signal Processing 2. Analog-to-Digital and Digital-to-Analog Conversion 3. Digital Signals 4. Difference Equations and Filtering 5. Convolution and Filtering 6. Z Transforms 7. Fourier Transforms and Filter Shape 8. Digital Signal Spectra 9. Finite Impulse Response Filters 10. Infinite Impulse Response Filters

	11. DFT and FFT Processing 12. Introduction to Audio Signal Processing 13. Introduction to Image Processing
教學方式	課堂教授,口頭報告,實務操作,
評量方法	自行設計測驗,實作評量,口頭報告,課堂討論,課程參與度(出席率),
指定用書	Fundamentals of Digital Signal Processing
參考書籍	“Digital Signal with Matlab,” Ingle and Proakis, Thomas Learning, 2000.
先修科目	Matlab programming skills are recommended but not essential for the students taking this course.
教學資源	http://faculty.stut.edu.tw/~tang/dsp/
注意事項	歡迎有心向學的同學，一起選修研討。
全程外語授課	1
授課語言 1	英語
授課語言 2	
輔導考照 1	
輔導考照 2	