朝陽科技大學 096學年度第2學期教學大綱
Multimedia Information Processing and Classification 多媒體資訊系統

當期課號	7427	Course Number	7427
授課教師	黃永發	Instructor	HUANG,YUNG FA
中文課名	多媒體資訊系統	Course Name	Multimedia Information Processing and Classification
開課單位	網路與通訊研究所碩士班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	使學生學習多媒體系統之基本理論與技術，並瞭解各種媒體之傳輸與壓縮標準。內容包括多媒體介紹，包括文字、影像、圖片、視訊、音效等各種媒體之原理，以及JPEG、MPEG2、MPEG4、JPEG2000等各種標準之原理與技術介紹，並學習一些基礎的編碼壓縮、網路傳輸、與多媒體系統之技術。	Objectives	Enabling technologies,Computer graphics,Vector graphics,Bitmapped images,Characters and font,Video,Animation,Combining media,Events, scripts and interactivity,Media and networks
教材	1.Single and Multi-Carrier DS-CDMA: Multiuser Detection, Space-Time Spreading, Synchronisation, Henzo, Yang, Kuan and Yen, John Wiley & Sons, 2003.	Teaching Materials	1.Single and Multi-Carrier DS-CDMA: Multiuser Detection, Space-Time Spreading, Synchronisation, Henzo, Yang, Kuan and Yen, John Wiley & Sons, 2003.
成績評量方式	Midterm 30% Homeworks 30% Final Reports 40%	Grading	Midterm 30% Homeworks 30% Final Reports 40%
教師網頁	http://www.cyut.edu.tw/~yfahuang		
教學內容	Part 1: Image Processing Chapter 1: Geometric image transforms Chapter 2: Image registration Chapter 3: Image colorization Chapter 4: Image inpainting Chapter 5: Facial image processing Part 2: Image Analysis Chapter 1: Detection of local features Chapter 2: Contour detection Chapter 3: Region segmentation Chapter 4: Content-based image retrieval Chapter 5: Texture analysis Chapter 6: Motion analysis Chapter 7: Camera calibration Chapter 8: Range image acquisition and analysis Chapter 9: Object recognition Part 3: Pattern Recognition Chapter 1: Classification by distance functions Chapter 2: Classification by linear discriminant functions Chapter 3: Nonlinear classifiers: Multilayer neural networks Chapter 4: Classifiers based on Bayesian decision theory Chapter 5: Classification by decision trees Chapter 6: Structural pattern recognition Chapter 7: Syntactic pattern	Syllabus	Part 1: Image Processing Chapter 1: Geometric image transforms Chapter 2: Image registration Chapter 3: Image colorization Chapter 4: Image inpainting Chapter 5: Facial image processing Part 2: Image Analysis Chapter 1: Detection of local features Chapter 2: Contour detection Chapter 3: Region segmentation Chapter 4: Content-based image retrieval Chapter 5: Texture analysis Chapter 6: Motion analysis Chapter 7: Camera calibration Chapter 8: Range image acquisition and analysis Chapter 9: Object recognition Part 3: Pattern Recognition Chapter 1: Classification by distance functions Chapter 2: Classification by linear discriminant functions Chapter 3: Nonlinear classifiers: Multilayer neural networks Chapter 4: Classifiers based on Bayesian decision theory Chapter 5: Classification by decision trees Chapter 6: Structural pattern recognition Chapter 7: Syntactic pattern recognition

	recognition Chapter 8: Multiple classifier systems Chapter 9: Clustering Chapter 10: Hidden Markov Models Chapter 11: Support Vector Machines Chapter 12: Biometrics Part 4: How to write a scientific paper?		Chapter 8: Multiple classifier systems Chapter 9: Clustering Chapter 10: Hidden Markov Models Chapter 11: Support Vector Machines Chapter 12: Biometrics Part 4: How to write a scientific paper?