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# ②國玄東華大學

# 教學計劃表 Syllabus

					學年/學期 Academic Year/Semester		
課程名稱(英文) Course Name in English	Introduction to Image Processing						
科目代碼 Course Code	CSIEB0440	系級 Department 學三 & Year		開課單位 Course-Offering Department	資訊工程學系		
修別 Type	學程 Program	學分數/時戶 Credit(s)/Hou		3.0/3.0			
授課教師 Instructor	林信鋒						
先修課程 Prerequisite							

#### 課程描述 Course Description

- 1. Introduction
- 2. Point Processing
- 3. Neighborhood Processing
- 4. The Fourier Transform
- 5. Image Restoration
- 6. Image Segmentation
- 7. Mathematical Morphology
- 8. Color Processing
- 9. Image Coding and Compression

#### 課程目標 Course Objectives

引導學生進入影像處理這個領域,培養影像處理的知識與技能。

To lead students into the field of image processing and cultivate the knowledge and skills of image processing

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	9/10 Class description			
2	9/17 Chapter 1 Introduction and Chapter 2 Images and MATLAB	Ex 1(Due 10/01)		
3	9/24 Chapter 3 Image Display, Chapter 4 Point Processing			
4	10/01 Chapter 5 Neighborhood Processing ~ 5.5	Ex 2(Due 10/22)		
5	10/08 5.6 ~ 7.5.1(p. 33) (Skip Chap 6)			
6	10/15 7.5.1 ~ 8.3			
7	10/22 8.4 & Chapter 9 Image Segmentation(p. 58, 9.10)	Ex 3(Due 11/12)		
8	10/29 9.10 (p. 58)~ 10.4 (p. 33)			
9	11/05 期中考試週 Midterm Exam (No Exam !) 10.4 (p. 33)~ 10.9			
10	11/12 校慶運動會(停課一天), School Anniversary and Sports Day (No class!)	Ex 4(Due 12/03)		

11	11/19 Midterm Exam I of Ch 1-5						
12	11/26 Midterm Exam Discussion, Chapter 13 Color Processing (Skip Chap 11, 12)						
13	12/03 Chapter 14 Image Coding and Compression						
14	12/10 Final Project						
15	12/17 Midterm Exam (II, Chap 7-10, Chap 13-14)						
16	12/24 Midterm Exam Discussion & Additional topics Final Project						
17	7 12/31 期末考試週 Final Exam (No Exam!) ~ Jan. 07 is the last class Final Project						
18	01/07 Supplement						
	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Mis	其他Miscellaneous:						
教學創新自評Teaching Self-Evaluation							
創新教學(Innovative Teaching)							
創新教學(							
問題導	Innovative Teaching)						
問題導翻轉教	Innovative Teaching)  向學習(PBL)  ■ 團體合作學習(TBL)  ■ 解決導向學習(SBL)						
問題導 翻轉教 社會責任(	Innovative Teaching)						
問題導翻轉教社會責任(	Innovative Teaching)						
問題導 翻轉教 社會責任( 在地實) 跨域合作(	Innovative Teaching)						
問題導 翻轉教 社會責任(	Innovative Teaching)						

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例 Percentage	多元評量方式 Assessments							
Items		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)	10%								Class attendance
期中考成績 Midterm Exam	60%	~							Closed book
期末考成績 Final Exam	15%				~				Final Project
作業成績 Homework and/or Assignments	15%		<b>~</b>						Program assignments
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.)

Introduction to digital image processing with MATLAB Asia Edition Alasdair McAndrew, Jung-Hua Wang, Chun-Shun Tseng 高立圖書有限公司

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)