國立台灣科技大學 114學年 第2學期　課程大綱

Spring 2026 NTUST Course Outline

授課教師：花凱龍

Instructor:Kai-Lung Hua

課程名稱：多媒體資訊系統導論

Course Title：Introduction to Multimedia Information Systems

2026/11/3

課程代號：CS3007701 Course Code 學分數：3 Credits	必選修：選修/半學年 Required/Electve:Elective/Half Yr. 先修課程： Prerequisites
節次教室：F10(TR-410) F8(TR-410) F9(TR-410) Time/Location	
專業核心能力： Core Professional Competencies	
課程網址： Course Website	

課程宗旨：
Course Objectives

1.多媒體資料簡介
2.多媒體發展平台
3.多媒體編輯軟體
4.多媒體資訊系統實體設計與建置

1. Introduction to Multimedia
1-1What is Multimedia
1-2 Multimedia and Hypermedia
1-3 Overview of Multimedia Software Tools
2. Graphics and Images Data Representations
2-1 Graphics/Images Data Types
2-2 Popular File Formats
3. Color in Image and Video
3-1 Color Science
3-2 Color Models in Images
3-3 Color Models in Video
4. Fundamental Concepts in Video
4-1 Types of Video Signal
4-2 Analog Video
4-3 Digital Video
5. Basics of Digital Audio
5-1 Digitization of Sound
5-2 MIDI(Musical Instrument Digital Interface)
5-3 Quantization and Transmission of Audio
6. Multimedia Data Compression
6-1 Lossless Compression Algorithms
6-2 Lossy Compression Algorithms
6-3 Image compression Standards
6-4 Basic Video Compression Techniques
7. Multimedia Communications
7-1 Multimedia Information Representation
7-2 Multimedia Networks
7-3 Application and Networking Terminology

課程大綱：
Outline of Lectures

1.多媒體資料簡介
2.多媒體發展平台
3.多媒體編輯軟體
4.多媒體資訊系統實體設計與建置

授課方式： Method of Instruction	講授 Lecture：% 分組討論 Group discussion：% 案例研討 Case study：% 操做練習 Practical exercises：% 講授 Lecture：%
教科書： Textbooks	
參考書目： References	
修課須知： Notice	
評量方式： Grading	
備註說明： Notes	