107-2 Full Curriculum of Da-Yeh University

Information			
Title	Virtual Reality Project	Serial No./ID	3629 /CDC7171
Required/Credit	Optinal /1	Time/Place	(Sun)8 /J
Language	Chinese	Grade Type	Text
Lecturer /Full- or Part-time	Cherng Jong Sheng /Full-time	Graduate Class	Non-graduating Class
School System /Dept /Class, Grade	Bachelor /Liberal Arts Center /Class 2, Grade 6		
Office Hour / Place	(Tue) 10:10~11:00, (Tue) 11:10~12:00, (Tue) 12:00~13:20, (Tue) 13:20~14:10, (Tue) 14:20~15:10 / H318		
Lecturer	n.a.		

Introduction

虛擬實境為近幾年來新興崛起的電腦應用科技，為一種結合電腦圖形、電腦仿真、人工智慧、感應及顯示處理等技術的發展成果，利用電腦模擬產生三維空間的虛擬世界，提供使用者視覺、聽覺及觸覺等綜合感知的人工環境，並讓人沉浸於電腦情境中，並能與之互動，感受到有如真實世界的聲光效果。目前虛擬實境的發展與應用已經相當的普遍，其特性非常適合應用於教育、導覽以及娛樂上。目前強調各學習領域使用資訊科技融入教學之精神，以擴展各領域學生的學習能力及動機。因此使用虛擬實境技術應用於各領域，應是未來資訊教育融入各學科可行方式之一。
本課程之目標除教授設計虛擬實境系統之基本原理及技術外，授課期間將會以製作簡易360度環景影片、校園景點導覽及塔房遊戲等虛擬實境專題為導向。

Outline

1.虛擬實境簡介 – 介紹虛擬實境發展歷程、技術原理與應用領域。
2.虛擬實境軟硬體設備簡介 – 介紹虛擬實境軟硬體設備種類及其應用平台。
3.虛擬實境系統體驗 – 體驗行動式平台及HTC Vive平台之虛擬實境應用。
4.虛擬實境校外參訪 – 至校外參觀相關企業之虛擬實境展覽館。
5.簡易虛擬實境專題實作(一) – 製作簡易360度環景影片，讓學生利用手機及Cardboard 頭戴顯示器觀賞。
6.簡易虛擬實境專題實作(二) – 製作簡易校園景點導覽，讓學生利用手機及Cardboard 頭戴顯示器瀏覽。
7. 簡易虛擬實境專題實作(三) – 製作簡易塔房遊戲，讓學生利用手機及Cardboard 頭戴顯示器進行虛擬互動遊戲。

Prerequisite

無

The Relationship Between Courses and Departmental Core Competencies and Basic Skills

- Fundamental Ability
- Professional Ability
- Practical Ability
- Teamwork Spirit
- Active Learning
- Creativity and Innovation
- Global Vision
- Professional Ethics
- Leadership and Management
- Confidence and Perseverance
- Humanistic Qualities

Teaching Plan

Core Capability	Weight(%)【A】	Ability index(Performance Indicators)	Teaching Methods	Assessment and Weight	Core Competency Learning Outcomes【B】	Final Exam Grades【C=B*A】
Active Learning	40	Consists in helping students actively partake in a variety of learning processes with the aim to achieve self-promotion and self-realization.	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation	Course Participation: 15% Product Manufacturing: 50% Record on Experiment: 20% Written Report: 15%	Total: 100	40
Creativity and Innovation	40	Consists in fostering students’ creative and critical thinking skills together with their ability to identify and solve problems in an effective way.	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation	Course Participation: 15% Product Manufacturing: 50% Written Report: 15% Record on Experiment: 20%	Total: 100	40
Humanistic Qualities	20	Consists in enriching students’ cultural and social knowledge, helping them acquire the right values systems, and increasing their positive attitude towards society and others. It also involves the nurturing of other skills, especially in terms of i	Lecturing Group Discussion Practical Operation (Experiment, Machine Operation	Course Participation: 15% Record on Experiment: 20% Product Manufacturing: 50% Written Report: 15%	Total: 100	20

Grade Auditing

Product Manufacturing: 50%
Record on Experiment: 20%
Course Participation: 15%
Written Report: 15%

Book Type (Respect intellectual property rights. Please use official textbooks and do not illegally photocopy others' works.)		
Book Type	Book name	Author
Instructor-compiled	略	略

Lesson Plan		
Weeks	Content	Teaching Methods
1	Introduction to Virtual Reality & Intellectual Property Protection (use legitimate textbooks only) & Traffic safety Propaganda	Lecturing
2	Introduction to VR Software and Hardware Devices	Lecturing、 Practical Operation (Experiment, Machine Operation
3	Experience on VR Applications	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
4	VR Project (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
5	VR Project (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
6	VR Project (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
7	VR Project (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
8	VR Project (1)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
9	VR Project (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
10	VR Project (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
11	VR Project (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
12	VR Project (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
13	VR Project (2)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
14	VR Project (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation

15	VR Project (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
16	VR Project (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
17	VR Project (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation
18	VR Project (3)	Lecturing、 Group Discussion、 Practical Operation (Experiment, Machine Operation