# 107-2 Full Curriculum of Da-Yeh University

| Information | | | |
|---|---|---|---|
| Title | Virtual Reality Design | Serial No./ID | 2228 /MDI3034 |
| Required/Credit | Optinal /3 | Time/Place | (Mon)ABC /PX302 |
| Language | Chinese | Grade Type | Number |
| Lecturer /Full- or Part-time | Cherng Jong Sheng /Full-time | Graduate Class | Graduating Class |
| School System /Dept /Class, Grade | Bachelor /Bachelor Program for Multimedia Digital Content /Class 1, Grade 4 | | |
| 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

Virtual reality is the emerging computer application technology in recent years. It is a combination of computer graphics, computer simulation, artificial intelligence, sensing and display processing technology. It uses computer simulation to generate virtual world in three-dimensional space and provides user the artificial environment of comprehensive perception, such as viewing, hearing and touching, and people are immersed in the computer context, and can interact with it to feel the sound and light effects like the real world. In addition to teaching the basic principles and techniques of designing a virtual reality system, the objective of this course is to implement some virtual reality projects, such as interactive virtual art exhibition project and 3D interactive games.

## Outline

1. Introduction to virtual reality
2. Introduction to hardware and software of virtual reality
3. Virtual reality experience
4. Implementation of virtual reality projects

## Prerequisite

none

## The Relationship Between Courses and Departmental Core Competencies and Basic Skills

- Acquire professional knowledge of multimedia digital content design
- Acquire the technologies, skills and the capability of using modern tools for practicing multimedia digital content design
- Acquire the capability of integrating multimedia digital content knowledge and technologies
- Acquire the capability of finding out, analyzing and solving complex interdisciplinary multimedia design problems
- Acquire the capability of creative thinking and innovational design

Acquire the capability of managing project, communicating each other, respecting different viewpoints and cooperating within the team

- Realize the industrial issues and understand the effects of multimedia design to industries, social ecology and economy, and worldwide
- Acquire the capability of lifetime learning

Acquire professional working ethics and society responsibility

---

| 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】 |
| Acquire professional knowledge of multimedia digital content design | 10 | Cultivate the capability of being familiar with multimedia digital content knowledge<br>Cultivate the capability of realizing multimedia digital content theory<br>Cultivate the capability of being possessed of multimedia digital content professional knowledge, including animation, comic, game design, and so on<br>Cultivate the capability of being possessed of multimedia digital content design quality and accomplishment, including cultural creativity, art, esthetics, and so on | Lecturing<br>Practical Operation (Experiment, Machine Operation | Record on Experiment: 30%<br>Product Manufacturing: 40%<br>Course Participation: 15%<br>Written Report: 15% | Total: 100 | 10 |
| Acquire the technologies, skills and the capability of using modern tools for practicing multimedia digital content design | 25 | Cultivate the capability of being possessed of and applying multimedia digital content professional design technologies and skills<br>Cultivate the capability of implementing multimedia digital content system<br>Cultivate the capability of using modern multimedia software and hardware tools | Lecturing<br>Practical Operation (Experiment, Machine Operation | Course Participation: 15%<br>Product Manufacturing: 40%<br>Written Report: 15%<br>Record on Experiment: 30% | Total: 100 | 25 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Acquire the capability of integrating multimedia digital content knowledge and technologies | 20 | Cultivate the capability of integrating theoretical knowledge and practical technology<br>Cultivate the capability of integrating visual communication, information technology and content management knowledge | Lecturing<br>Practical Operation (Experiment, Machine Operation | Course Participation: 15%<br>Record on Experiment: 30%<br>Product Manufacturing: 40%<br>Written Report: 15% | Total: 100 | 20 |
| Acquire the capability of finding out, analyzing and solving complex interdisciplinary multimedia design problems | 10 | Cultivate the capability of analyzing and organizing complex multimedia design problems<br>Cultivate the capability of exploring complex multimedia design problems<br>Cultivate the capability of solving and practicing complex multimedia design systems | Lecturing<br>Practical Operation (Experiment, Machine Operation | Record on Experiment: 30%<br>Product Manufacturing: 40%<br>Course Participation: 15%<br>Written Report: 15% | Total: 100 | 10 |
| Acquire the capability of creative thinking and innovational design | 10 | Cultivate the capability of creative thinking<br>Cultivate the capability of innovational design | Lecturing<br>Practical Operation (Experiment, Machine Operation | Record on Experiment: 30%<br>Product Manufacturing: 40%<br>Course Participation: 15%<br>Written Report: 15% | Total: 100 | 10 |
| Acquire the capability of managing project, communicating each other, respecting different viewpoints and cooperating within the team | 5 | Cultivate the capability of project planning, execution and management<br>Cultivate the capability of communication, coordination, and team cooperation<br>Cultivate the capability of respecting different viewpoints | Lecturing<br>Practical Operation (Experiment, Machine Operation | Record on Experiment: 30%<br>Product Manufacturing: 40%<br>Course Participation: 15%<br>Written Report: 15% | Total: 100 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Realize the industrial issues and understand the effects of multimedia design to industries, social ecology and economy, and worldwide | 10 | Cultivate the capability of realizing the industrial issues of multimedia digital content<br>Cultivate the capability of understanding the effects of multimedia design to industries, societies, and worldwide<br>Cultivate the capability of great foresight and international view<br>Cultivate working proficiency in career of multimedia digital content<br>Cultivate the capability of solving industry actual problem | Lecturing<br>Practical Operation (Experiment, Machine Operation | Course Participation: 15%<br>Product Manufacturing: 40%<br>Record on Experiment: 30%<br>Written Report: 15% | Total: 100 | 10 |
| Acquire the capability of lifetime learning | 10 | Cultivate the capability of lifetime learning by different ways | Lecturing<br>Practical Operation (Experiment, Machine Operation | Course Participation: 15%<br>Product Manufacturing: 40%<br>Record on Experiment: 30%<br>Written Report: 15% | Total: 100 | 10 |

## Grade Auditing

Product Manufacturing: 40%
Record on Experiment: 30%
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 |

Material

| Lesson Plan | | |
|---|---|---|
| Weeks | Content | Teaching Methods |
| 1 | Introduction to Virtual Reality & Intellectual Property Protection (use legitimate textbooks only) & Traffic safety Propaganda | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 2 | Introduction to VR Software and Hardware Devices | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 3 | Experience on VR Applications | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 4 | VR Game Design (1) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 5 | VR Game Design (2) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 6 | VR Game Design (3) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 7 | VR Game Design (4) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 8 | VR Sales System Design (1) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 9 | Midterm | Practical Operation (Experiment, Machine Operation |
| 10 | VR Sales System Design (2) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 11 | VR Sales System Design (3) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 12 | VR Sales System Design (4) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 13 | VR Sales System Design (5) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 14 | VR Guide System Design (1) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 15 | VR Guide System Design (2) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 16 | VR Guide System Design (3) | Lecturing、 Practical Operation (Experiment, Machine Operation |

| | | |
|---|---|---|
| 17 | VR Guide System Design (4) | Lecturing、 Practical Operation (Experiment, Machine Operation |
| 18 | Final | Practical Operation (Experiment, Machine Operation |